



The institutionalization of benchmarking in the Danish construction industry

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TECHNICAL UNIVERSITY OF DENMARK

Department of Management Engineering



**THE INSTITUTIONALIZATION OF BENCHMARKING IN
THE DANISH CONSTRUCTION INDUSTRY**

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The institutionalization of benchmarking in the Danish construction industry



TECHNICAL UNIVERSITY OF DENMARK

Byggeriets Evaluerings Center



Styrelsen for Forskning
og Innovation

Ministeriet for Forskning, Innovation
og Videregående Uddannelser

PREFACE

The project has been completed with financing from Realdania and the Danish Agency for Science Technology and Innovation as an industrial PhD in collaboration between the Benchmark Centre for the Danish Construction Sector (Byggeriets Evaluerings Center, BEC) and the Technical University of Denmark (DTU). The PhD started in August 2009 and finished in December 2012.

My background as a civil engineer has provided me with the ability to rationalize on complex issues and analyze and/or test a hypothesis through applied science with the overall aim of concluding with some technical recommendations of improvements, changes, technical solutions, etc. As this PhD study progressed, I realized that my engineering disciplines were not sufficient for meeting the demands of conducting this PhD study.

Accordingly, I primarily attended courses that were distant from my engineering background. Qualitative research techniques, discourse analysis, qualitative methods and methodology, and philosophy of science are just parts of my self-imposed “up-qualifications” as researcher.

This journey has not been pain-free, and I must admit that my first encounter with social science was somewhat confusing and frustrating to me. But over time, and as social science revealed its possibilities and justifications for my study, I learned to appreciate this research area.

I would like to thank a number of people, who in different ways have made it possible for me to finish this project. My supervisors, Kirsten Jørgensen, Stefan Christoffer Gottlieb, Peter Hesdorf, and Sten Bonke, deserve special mentioning: Kirsten for letting me pursue my academic interests and venture into new theoretical fields and research designs. Your caring support throughout the entire process has helped me to keep on the track, and without your always reliable support and encouragement when the tasks seemed most chaotic and unmanageable, I question whether this thesis would have been a reality. Stefan for being a good friend and providing me supervision far beyond what could be expected. I cannot thank you enough for always embracing me and my thesis in your busy schedule. Your critical feedback has been essential during my PhD process and for this end product. Peter for first of all inviting

me into the daily life at BEC. This study has been conducted for BEC, and without Peter, it would not have been a reality. I thank you especially for your encouragement to pursue my interests and define my study in ways I found to be most contributing to the work and interests of BEC. I hope that with this study I have done so. Sten for helping me along the way and for always giving support when needed.

Beside from my supervisors, I would like to thank my colleagues at DTU Management Engineering. Especially, Jens Stissing Jensen I would like to thank for introducing me to institutional theory. I further thank you for always being willing to discuss my problems and find solutions to my frustrations.

Finally, I thank my dear family for their support and encouragements—especially during the last hard time of the study. I particularly would like to thank my loving wife, Juliane, for managing everything at home and still encouraging me to always prioritize my PhD even though it meant spending most of my evenings at the office. Your ability to disregard your own needs and ability to take care of the home and our little son, Sigge, has amazed me. You are exceptional.

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DANSK RESUMÉ

Denne afhandling tager et teoretisk udgangspunkt i institutionel teori og omhandler institutionaliseringen af benchmarking i den danske byggebranche. Ved besvarelse af følgende tre forskningsspørgsmål, afdækker denne afhandling et studie af institutionaliseringen af benchmarking:

- Hvordan og til hvilke formål er benchmarking blevet introduceret som løsning til politiske problemstillinger i den danske byggebranche?
- Hvordan har politiske kampe og forhandlinger haft indflydelse på institutionaliseringen af benchmarking?
- Hvordan har dette studie bidraget med anbefalinger til, hvordan nye strukturer kan institutionaliseres i den danske byggebranche?

I metodekapitlet udfolder jeg, hvordan institutionel teori muliggør nye og vigtige undersøgelser til forståelse af institutionalisering af benchmarking. Jeg redegør for, hvordan teorivalget påvirker min analytiske tilgang til studiet, og yderligere hvordan institutionel teori kan bidrage med vigtig indsigt i forhold til dette studie. I metodekapitlet præsenteres tre modeller som anvendes i denne afhandling: “Three Pillars of Institutions,” “contradictions,” og “framings.” Yderligere vil kapitlet redegøre for de anvendte metoder til dataindsamlingen og de valg, som er foretaget i forhold til at analysere institutionaliseringsprocesser.

Analysen folder sig ud over syv kapitler, startende med en redegørelse for det politiske grundlag, der var årsag til at benchmarking blev et politisk forslag til en fremtidig institution i den danske byggebranche. Det andet kapitel demonstrerer, hvordan benchmarking blev introduceret i slutningen af 1990’erne som en teknologi, der kunne adressere politiske fokusområder fra to udviklingsprogrammer fra slut-halvfemserne. I det tredje kapitel demonstreres, hvordan private aktører fra byggeriet forsøgte at tage kontrol over institutionalisering af benchmarking ved at etablere Byggeriets Evaluerings Center (BEC), som skulle udvikle og udbrede benchmarking til byggeriet. Det fjerde kapitel redegør for, hvordan benchmarking blev konkretiseret i form af et benchmarkingsystem og formuleret til at adressere flere politiske fokusområder i byggeriet. På denne måde blev BEC til en politisk arena, hvor mange lokale perspektiver og strategiske interesser skulle håndteres. Det femte kapitel

omhandler operationalisering af benchmarking, og viser hvordan konkretiseringen og implementering af benchmarking gav anledning til reaktioner fra aktører med forskellige og divergerende interesser i benchmarkinginitiativet. Politiske kampe opstod i takt med, at aktører udtrykte forskellige politiske interesser i institutionaliseringen af benchmarking. De politiske kampe, der bliver redegjort for i kapitel fem, konstituerede et stærkt politisk pres og påkrævede transformationer af institutionaliseringen, for at benchmarking kunne bevare institutionel legitimitet. Det politiske pres resulterede i radikale transformationer af institutionaliseringen af benchmarking. Denne transformation bliver der redegjort for i kapitel seks. Som resultat af transformationen fik private virksomheder i byggeriet forøget mulighed for at få indflydelse på den fremtidige institutionalisering. Derudover, og relateret til virksomhedernes indflydelse på institutionaliseringen, kom der konkurrenter til BEC på markedet. Denne konkurrence resulterede i implikationer i forhold til at forstå de instrumentelle formål og overordnede ambitioner for benchmarking. Det sidste analysekapitel afdækker, hvordan benchmarking bliver forstået og fortolket blandt praktikerne i byggeriet, der var blevet centrale aktører i institutionaliseringen. Dette kapitel viser, hvordan benchmarking som institution bliver integreret i praktikernes oplevede virkelighed og demonstrerer det samspil og fortolkninger, som benchmarking giver anledning til.

Med udgangspunkt i de tre forskningsspørgsmål, diskuterer og konkluderer det sidste kapitel af afhandlingen på analysen. I kapitlet fremføres en forståelse af institutionaliseringsprocesser som værende højpolitiske og afhængig af aktørers politiske motivationer for at transformere de fremvoksende institutioner. Baseret på resultaterne fra analysen, konkludere jeg afhandlingen med anbefalinger til, hvordan man kan bygge og understøtte nye institutioner i den danske byggebranche.

ABSTRACT

With a theoretical point of origin in contemporary institutional theory, this thesis is about the institutionalization of benchmarking in the Danish construction industry. By answering the following three research questions, the thesis embraces over an enquiry of the institutionalization of benchmarking:

- How and for what purposes has benchmarking originally been introduced as a solution to political issues in the Danish construction industry?
- How have political struggles and negotiations affected the institutionalization of benchmarking?
- How has the study contributed with recommendations on how to institutionalize new structures in the Danish construction industry?

In the methodology chapter, I outline how institutional theory facilitates new and important inquiries into understanding institutionalization of benchmarking. I account for how the choice of theory is influencing my analytical approach to conduct this study and how institutional theory is providing important insight in this study of benchmarking. In the methodology chapter, I present three analytical models that are applied in the study; “Three Pillars of Institutions,” “contradictions,” and “framings.” Further, the chapter accounts for the data collection methods used to conduct the empirical data collection and the appertaining choices that are made, based on the account for analyzing institutionalization processes.

The analysis unfolds over seven chapters, starting with an exposition of the political foundation from which benchmarking originally arose as a political proposal for a future institution in the Danish construction industry. The second chapter demonstrates how benchmarking was introduced in the late 1990s as a technology addressing political focus areas from two development programs in the late 1990s. In the third chapter, it is demonstrated how private actors from the construction industry attempted to take control over the institutionalization of benchmarking by establishing an Evaluation Centre (Byggeriets Evaluerings Center, BEC) from which benchmarking was to be developed and disseminated to the construction industry. The fourth chapter demonstrates how benchmarking was concretized into a benchmarking

system and articulated to address several political focus areas for the construction industry. BEC accordingly became a political arena where many local perspectives and strategic interests had to be managed. The fifth chapter is about the operationalization of benchmarking and demonstrates how the concretizing and implementation of benchmarking gave rise to reactions from different actors with different and diverse interests in the benchmarking initiative. Political struggles emerged as actors expressed diverse political interests in the institutionalization of benchmarking. The political struggles accounted for in chapter five constituted a powerful political pressure and called for transformations of the institutionalization in order for benchmarking to attain institutional legitimacy. The political pressures ended up radically transforming the institutionalization of benchmarking. This transformation is accounted for in chapter six. As a result of the transformation, private construction companies were provided an opportunity to influence the future institutionalization. Additionally, and related to the construction companies' influence on the institutionalization, competitors to BEC emerged. This competition entailed implications for how to perceive the instrumental purposes and overall objectives for benchmarking. Having the construction companies as important carriers of the institutionalization, the final chapter of the analysis uncovers how benchmarking is understood and interpreted among the practitioners in the construction industry. The chapter reveals how the benchmarking institution is incorporated in their experienced reality and demonstrates the interplay between and different interpretations among practitioners benchmarking gives rise to.

With a point of departure in the three research questions, the final chapter discusses and concludes on the analysis. Here I advance an understanding of institutionalization processes as being highly political and reliant on actors' political motivations to transform the rising institution. Based on the finding from the analysis, I conclude the thesis with recommendations for how to construct and carry institutions in the Danish construction industry.

1 INTRODUCTION

The research topic for this thesis is the development of a benchmarking initiative for the Danish construction industry and unfolds how benchmarking has been transforming since it was first introduced as a suggestion to improve productivity and quality in the Danish construction industry in a construction political Task Force in 2000.

This chapter outlines the background from which this thesis rests and my motivations for conducting this PhD study. Further, I account for how my PhD journey has gone from having a managerial focus with an ambition to study the local organizational effects of benchmarking towards having a sectorial focus on the role of actors in the development and transformation of a benchmarking initiative for the Danish construction industry. I argue that in order to engage in studies of managerial aspects that are mostly concerned with the organizational effects and local practices that derive from benchmarking, it is a prerequisite to understand the context from which benchmarking unfolds and how it attains managerial legitimacy.

Based on this focus for the study, I account for my aims and objectives and conclude the chapter with a short unfolding of the title and my research questions.

1.1 BACKGROUND AND MOTIVATIONS FOR THE THESIS

The Danish construction industry has been accused of being conservative and very traditional (By- og Boligministeriet, Erhvervsfremmestyrelsen, 2000; Thuesen, 2007). Lacking productivity development compared to other industries has over time led to a heavy political interest in constructing a construction policy that addressed these productivity issues. The societal economical loss caused by failures and defects in the construction industry has been assessed to make up 8–10% of the overall production costs (Apelgren et al., 2005), making failures and defect a central issue in the construction policy. With very different research objectives, these industrial disorders of the Danish construction industry have been a point of departure for many PhD studies over time (e.g., Simonsen, 2007; Gottlieb, 2010; Jensen, 2011), addressing different development initiatives that have been launched with the purpose of addressing the lacking productivity and quality. Likewise I started my industrial PhD study with an empirical point of departure in one of the political development initiatives that originated from these commonly accepted disorders of the construction industry. It was natural that due to my employment in Byggeriets Evaluerings Center (the Benchmark Centre for the Danish Construction Sector), who operated a benchmarking system that had been derived from political ambitions of increasing productivity and quality of the construction industry, that I was to have the benchmarking initiative as empirical field of research in some way.

The benchmarking concept was introduced in 2000 as an element in a political task force report to increase quality and productivity in the Danish construction industry. It was clear that benchmarking was going to be a central part of the construction policy (Byggepolitisk Task Force, 2000). As a result of these initial political ambitions, benchmarking gained a foothold in the Danish construction industry throughout the past decade (Rasmussen, 2011).

As described, I started my PhD study with the ambition of revealing the effects of the benchmarking initiative in a local context where benchmarking is used to derive organizational improvements. In the beginning of my PhD study, I read through historical documents and newspaper articles about the benchmarking initiative, and it became more and more evident that benchmarking was surrounded by many purposes and perceptions for how to achieve improvements. Further, it became obvious that the initiative had been radically transformed from its original design. As I read through the historical documents, it became obvious that the development of benchmarking had been influenced by both private and public actors and that

their interests in and interpretations of the initiative were not corresponding. This was not surprising, as construction political activities for several years had been developed in collaboration between public and private actors (Kristiansen et al., 2004; Gottlieb, 2010; Jensen, 2011). It did, however, lead me to reconsider my ambitions of studying benchmarking from a managerial perspective, as the changes during the development and implementation of benchmarking entailed that the normative expectations to the organizational effects and practices of benchmarking did not seem to be unambiguous. This made it difficult for me to extract a uniform interpretation of how benchmarking was considered to generate organizational improvements and which improvements were considered to derive from the benchmarking initiative. One of the central premises to pursuing my original ambitions of studying the effects of benchmarking through a managerial focus was thus being challenged, as one critical question arose:

How could I study the organizational effects and practices of benchmarking in the Danish construction industry if the instrumental purposes and overall objectives for benchmarking are both changing and ambiguous?

I recognized that benchmarking had been operating on a foundation of incoherent interpretations of its instrumental purposes and overall objectives, and I understood that a prerequisite for understanding how benchmarking was thought to generate improvements in the Danish construction industry was an unfolding of the development of benchmarking and the consequences of incoherent interpretations of the initiative. This caused me to disregard my original ambitions for the study, as the inevitable question of whether benchmarking “works” became secondary compared to an understanding of the prerequisites for and interpretations of how benchmarking is considered to generate organizational improvements.

The historical insight in the development of the benchmarking initiative accordingly drove me to the following conclusion: Studies of benchmarking are not (or ought not to be) isolated to a managerial focus if the instrumental purposes and overall objectives are not uniform but are in fact being politically negotiated between actors with an interest in the determinations of these purposes and objectives. I searched for theoretical and methodological approaches in the benchmarking research to conduct a study of how benchmarking initiatives are shaped and politically negotiated over time but found that such issues were not addressed. This was paradoxical, as the literature acknowledged that the instrumental purposes and overall

objectives of benchmarking are prerequisites to get a hold on in order to assess the effects and practices of benchmarking in organizational contexts. In the following, I will account for how the prevalent benchmarking literature did not cope with inconsistencies of the instrumental purposes and overall objectives of benchmarking, as the literature appeared to be mainly based on normative expectations of how organizational improvements derived from benchmarking.

One of the first benchmarking gurus was Robert C. Camp, who introduced benchmarking in 1989 (Camp, 1989). Since 1989 the concept has been widely accepted as deriving organizational strategies leading to improvement of processes, higher productivity, and thus stronger market positions (Chen, 2005; Dawkins et al., 2007).

The concept also gained a foothold in the construction industry, as several benchmarking initiatives rose in construction industries in different countries (e.g., The Benchmark Center for the Danish Construction Sector, Constructing Excellence, Construction Industry Institute Benchmarking and Metrics, EIB International Comparisons of Construction, Chile National Benchmarking System, Comparison of house-building productivity in Scandinavia). When I got an overview of these initiatives, I soon found that they reproduced the same above accepted perceptions of benchmarking as a technology to derive organizational improvements and did not address the theoretical or methodological discussions of how these improvements were derived in practice, nor did the initiatives reflect critical considerations of how to cope with political negotiations and changes of the instrumental purposes and overall objectives of benchmarking. This was not exclusive for the construction research community, as the general benchmarking literature was also reconstituting these normative expectations to benchmarking, mainly by contributing to the benchmarking literature with applications, case studies, and models showing these benefits of benchmarking (Rasmussen, 2011). This led me to my first conclusion: Studies of how benchmarking initiatives are developed and how they produce improvements in organizational contexts have been widely overlooked. (Luckily) I was not alone with this perception, as other researchers found that the research topics and definitions of benchmarking “are predominantly outcome orientated: they address the purpose of benchmarking, not in terms of its essence, but in terms of its potential contribution to organizational success” (Moriarty & Smallman, 2009: 488). Scrutinizing the benchmarking literature, I further found that benchmarking was not unambiguous, as the literature revealed

very different benchmarking approaches that were fundamentally different in their design and purposes (Rasmussen, 2010).

The predominant benchmarking research are on a managerial focus with a stable and uniform interpretation of the instrumental purposes and overall objectives of benchmarking and do not consider or address the political dimension of benchmarking as sectorial development initiatives, where the core issue is to determine the instrumental purposes and overall objectives for benchmarking. There are significant differences between studies of benchmarking in a managerial perspective and studies of benchmarking that are developed to embrace an entire industrial sector as the field of research shifts from an organizational level, where benchmarking is understood as generating effects and practices through a rather stable rationale of its instrumental purposes and overall objectives, to a sectorial level, where benchmarking is understood as a having different instrumental purposes and overall objectives that are encompassing the interests of several actors and are being negotiated over time.

I accordingly found the benchmarking research to be insufficient, as the organizational effects and practices of benchmarking are highly reliant of the preceding political negotiations between actors who have had a role in the development of the benchmarking initiative for the Danish construction industry. These political preconditions of the benchmarking initiative constitute the political negotiations as an empirical area of research to be far more relevant and legitimate than an organizational study on the effects and practices of a benchmarking initiative that is surrounded by inconsistent interpretations of its instrumental purposes and overall objectives. A thorough understanding of the Danish benchmarking initiative calls for a political dimension, where the study is about how the benchmarking initiative is politically negotiated and shaped, as it is these negotiations and shapings that constitute the foundation from which managerial studies of benchmarking find their empirical outset. To study benchmarking on a sectorial level require a political focus, where the shaping of the instrumental purposes and overall objectives of benchmarking are considered to be less stable and in the risk of transformations, as benchmarking is continuously being modified and is not necessarily unambiguously translated into uniform managerial strategies to derive organizational improvements. In organizations, managements can determine and pursue a managerial ambition for benchmarking, but when studying benchmarking as a sectorial development initiative for the Danish construction industry, it becomes less explicit for what purposes benchmarking is conducted. It might be a

political ambition that benchmarking is to be facilitated in an organizational level, but it is not a given outcome that a benchmarking initiative implemented in an entire industry will derive organizational improvements in local contexts and even less a given that the organizational practices and effects of benchmarking have a base in a common recognition of the instrumental purposes and overall objectives of benchmarking.

Given that the benchmarking initiative is not uniform in its instrumental purposes and overall objectives for generating organizational improvements, the organizational effects and practices become of less importance than the political conditions under which benchmarking is negotiated and shaped. To understand and study benchmarking as a sectorial development initiative makes it relevant to consider benchmarking as something that is politically negotiated between different actors and central to understanding the game of politics that entails transformations of the instrumental purposes and overall objectives for benchmarking.

1.2 OBJECTIVES

With the above interest of orientating the thesis towards an unfolding of the development of benchmarking and the consequences of incoherent interpretations of the initiative, I designed my study in a way that could 1) account for how benchmarking has transformed from a politically constructed response to the lack of quality and productivity in the Danish construction industry to something that is radically different from the original design, 2) elucidate how and with what interests actors have engaged in the development of benchmarking and caused transformations of benchmarking that have influenced the prevalent objectives and interpretations of how benchmarking was intended to generate improvements of quality and productivity, and 3) account for how to navigate in a political environment where several actors are provided contributory influence in the development and implementation of construction political initiatives.

In this way, this study embraces an exposition of how and why transformations of benchmarking have occurred over time in order to understand the premises for how the initiative became a legitimate development activity from which improvements of quality and productivity of the Danish construction industry could derive.

1.3 EXCLUSIONS

The scope of the study does not extend to a study of whether benchmarking has actually had effects on the productivity and quality of the Danish construction industry. Nor does it go into an inquiry of the technicalities of benchmarking, these being statistical calculations, measures, etc.

My empirical field of research is accordingly delimited to those topics that are relevant in revealing how benchmarking has been articulated and presented as a legitimate development initiative addressing the lack of quality and productivity in the Danish construction industry, topics that reflect how benchmarking has changed over time, and topics that reveal how actors attempt to attain influence on the development and implementation of benchmarking in the Danish construction industry. This delimitation of my study has facilitated a thorough analysis and exposition of how and why benchmarking has been changed due to political negotiations and due to an inclusion of private actors in the development and implementation of construction political initiatives.

1.4 UNFOLDING OF THE TITLE AND RESEARCH QUESTIONS

As a consequence of my objectives, I needed a theoretical framework that could help me elucidate how and why benchmarking originally occurred as a politically suggested development initiative and, additionally, the conditions that caused transformations of benchmarking. My theoretical inspiration was found in institutional theory, which provided opportunities to study how new structures (including schemas, rules, norms, routines, values, and beliefs) become established as authoritative guidelines for actors. My main motivation for choosing institutional theory is based on the high emphasis the theory places on actors and agency in the implementation of new structures. In this way, *institutionalization* became a central concept in my study, and very simplified it can be understood as “the process from which new structures attain legitimacy in an institutionalized field.” With the concept of institutionalization I was provided a theoretical basis for unfolding how development initiatives like benchmarking could be transformed or even rejected by actors in the quest for attaining institutional legitimacy.

The title “The institutionalization of benchmarking in the Danish construction industry” reflects my choice of theory and, simultaneously, my main objective of unfolding the institutionalization of the benchmarking initiative.

Based on my aims and objectives I find the following research questions adequate for an overall ambition of conducting an enquiry of the institutionalization of benchmarking:

- How and for what purposes has benchmarking originally been introduced as a solution to political issues in the Danish construction industry?
- How have political struggles and negotiations affected the institutionalization of benchmarking?
- How has the study contributed with recommendations on how to institutionalize new structures in the Danish construction industry?

This first research question seeks to cover the institutional context from which benchmarking originated and how benchmarking was considered to be a legitimate construction political initiative in the Danish construction industry. The research question accordingly addresses how the institutional environment of the construction policy provided a foundation from which benchmarking should find institutional legitimacy.

The second research question is about how the historical development of benchmarking has been influenced by actors’ engagement in political struggles and negotiations and their political interest in the institutionalization of benchmarking.

The third research question is of a more perspectival nature and outlines how the institutionalization of benchmarking can contribute with general insight in how construction political development initiatives are shaped in negotiations between actors with contributory influence in the development of the construction industry. In this way, this research question discusses how the means-end relationships of rising institutions are transforming as a consequence of the interplay between institutionalization processes and politically motivated actors in the Danish construction industry.

In this way, the three research questions have a high degree of overlap since the first question introduces the political premises for introducing benchmarking as a political development initiative for the Danish construction industry. The second question reveals how the

benchmarking initiative has been transformed as a consequence of the contemporary setup for developing and executing construction political activities. The third question illuminates the insights from the answers to the two other questions to facilitate a discussion of how benchmarking and other construction political initiatives can be constructed in ways that both take political ambitions and the inclusion of multiple actors in the development and implementation of political initiatives into account.

2 THEORY

The objective of this chapter is to present the basis used to theoretically address and understand the development of benchmarking in the Danish construction industry.

The choice of theory that derives from the field of “institutionalism” has been chosen for this study due to its ability to 1) explain the processes by which structures, including schemas, rules, norms, routines, values, and beliefs, become established as authoritative guidelines for social behavior; 2) contribute with an understanding of how new structures emerge and are adopted; and 3) explain how existing institutions and new structures are being shaped within a field through actors’ ability to influence their institutional environment.

2.1 INSTITUTIONAL THEORY

A brief and general review of the development of institutional theory is provided in order to illuminate how the more contemporary work applied to this study deviates from the earlier work on institutionalism.

The study of institutions and their functioning and influences on society has a long history in organizational analysis since it is a recognized perception that organizations exist in an environment of institutions and that these institutions exert some degree of pressure on them. Although, far from all organizations are institutions and not all institutions are organizations; according to the below table, organizations are crucial in institutional theory since they have the quality to carry or challenge the institutions that constitute the institutional environments, “characterized by the elaboration of rules and requirements to which individual organizations must conform if they are to receive support and legitimacy” (Scott, 2001:132).

Prior to a continuation of the review of institutionalism, a broader conceptualization of institutions and institutionalization seems beneficial. Jepperson (1991) presented the following as representations of institutions.

Institutions

Marriage	The handshake	Academic tenure	The corporation
Sexism	Insurance	Presidency	The motel
The contract	Formal organization	The vacation	The academic discipline
Wage labor	The army	Attending college	Voting

Table 1: Examples of institutions. From Jepperson, 1991:144

Even though these institutions seem very different, they share the commonalities of being “production systems,” “enabling sources,” “social programs,” or “performance scripts.” Jepperson (1991) provides an even more unifying conceptualization of institutions:

“*Institutions* represent a social order or pattern that has attained a certain state or property; *institutionalization* denotes the process of such attainment. By *order* or *pattern* I refer, as is conventional, to standardized interaction sequences. An institution is then a social pattern that reveals a particular reproduction process... Put in another way:

institutions are those social patterns that, when chronically reproduced, owe their survival to relatively self-activating social processes” (Jepperson, 1991:145).

Institutions embody the shared meanings that are considered as natural and taken for granted within an organizational field. Commonly, institutions are described as any structures of social order which function as templates for the way we perceive our environment and how we act:

“Institutions are the humanly devised schemas, norms, and regulations that enable and constrain the behavior of social actors and make social life predictable and meaningful (North, 1990; Powell & DiMaggio, 1991; Scott, 2001).” (Hargrave and Van de Ven, 2006:866)

Institutions specify and justify behaviors and can thus be viewed as performance scripts reflecting social structures and accepted interpretations of social life and, to some extent, structuring and repeating practices, deviations from which are counteracted by sanctions or are costly in some manner (Jepperson, 1991), thus institutions come across as natural and taken for granted—creating a mutually perceived reality.

An often raised critique of institutional theory is that the theory is inherently static, but it seeks to explain institutions as political constructions, which on the other hand are very dynamic processes. Institutional theory is in this way criticized for attempting to explain differences among institutions, more that it attempts to explain the development of institutions. The contemporary institutional theory, however, addresses the dynamics of constructing new institutions and highly considers the political processes that occur as new structures are presented and implemented in organizational fields in attempts to generate changes. This process of structures becoming institutions is termed institutionalization.

2.2 INSTITUTIONALIZATION

The process by which behavior becomes institutionalized patterns of actions is central in understanding institutional change since the term refers to the process of embedding humanly devised structures: when they become taken for granted as a “natural” feature of social life and are constituent and of actors’ perceived rationality as well as explanatory to their behavior. For something to be institutionalized is thus to be regarded the ultimate achievement for actors with an interest in anchoring new behavior within a field.

Berger and Luckmann (1966) introduce institutionalization as the processes by which humanly devised structures transcend their regulative function of socially ordering a field but even manifesting themselves as habituated natural activities among actors in the same institutional environment. When actors no longer consider their behavior as being partly controlled by an institution, because the institution becomes so taken for granted that acting in accordance with it is being regarded as rational behavior by those sharing the institution, the institution can be considered to be successfully *institutionalized* within the institutional environment. Actors are no longer experiencing the introduced institution as objective processes or structures. Rather it has become a meaning system, inscribed in a larger cultural framework.

Regardless, a unifying acceptance among institutional theorists that institutions are phenomena that influence human behavior and social processes, and that they have pivotal influence on societal economic, political, and social developments, the historical development of institutionalism has resulted in a heterogeneously overall perception of institutional theory. In his review, Scott (2001) states:

“The concepts of institution and institutionalization have been defined in diverse ways, with substantial variation among approaches. Thus, the beginning of wisdom in approaching institutional theory is to recognize that there is not one but several variants. Some versions are much more carefully defined and explicit about their definitions and referents, while others are less clear in conceptualization. Although there seems to be an underlying similarity in the various approaches, there is little agreement on specifics” (Scott, 1987: 493).

Researchers of institutions have, however, not always addressed institutionalization as institutional theory originally had a rather normative conception of the interplay between institutions and actors. In the following, I will account for how institutional theory has transformed from rationalism towards aspects of cognitive and cultural explanations of institutions and their functions in order to understand how actors play a significant role in the forming of new institutions.

2.3 INSTITUTIONALISM – RATIONALISM, ISOMORPHISM, AND ROLE OF ACTORS

Initially, beginning from the late 1940s, institutional theory focused mainly on how institutions function to integrate organizations with other organizations in society and on explaining how

institutionalized structures affected organizations. Having a rationalist approach, this original “old” institutionalism perspective draws in the normative assumption of organizations as constrained and obligated by the norms and rules of institutions. In this perspective, individuals are acting independent of one another, and collective actions can be understood as the sum of individuals’ actions (DiMaggio and Powell, 1991); institutions are considered to be limiting organizational behavior (Powell, 2007). The theoretical interest is on the influences institutions have on organizations in conforming their behavior, and the study of interest is phenomena such as universalistic rules, contracts, and authority (Thornton and Ocasio, 2008); adoption of socially approved templates; and the organizational resilience of institutional prescriptions (Greenwood and Suddaby, 2006).

In the 1970s a different approach to institutional analysis emerged, caused by an increasing necessity among scholars to develop a sociological approach to cope with the challenges in understanding and addressing institutions from a theoretical perspective (DiMaggio and Powell, 1991) and to understand how institutions affect society. More and more studies observed complexities and variety of organizational responses to institutional pressures and the important role of internal organizational practices in understanding institutions. It highlighted the necessity for institutionalists to rethink the notion of organizations as acting in a relatively homogeneous way on a common set of pressures (Powell, 2007), thus it prompted an introduction of the role of culture and cognition in institutional analysis from a micro perspective Zucker (1977), an emphasis on the taken for granted nature of institutions, and the role of cultural persistence as a measure of institutionalization. From a macro perspective, the notion of “isomorphism” became established as a conceptualization of the process occurring when organizations become uniform, viewed from a societal level, caused by their conforming of formal structures in respect to external pressures or requirements for attaining legitimacy (Mayer and Rowan, 1977). The theory of isomorphism was developed by DiMaggio and Powell (1983) and provides a theoretical understanding of why “organizations are becoming more homogeneous, and that elites often get their way, while at the same time enabling us to understand the irrationality, the frustration of power, and the lack of innovation that are so commonplace in organizational life” (DiMaggio and Powell, 1983:157). With their mimetic sources of isomorphism, DiMaggio and Powell brought focus to what was so far regarded as mindless behavior in response to cultural rationalization (Thornton and Ocasio, 2008). The theoretical approach and conceptualization of organizational conformity led to a movement in

bringing the study of interest from the societal level to the level of organizational fields, and proponents acknowledged that formal organizational structures were to be understood as reflections of the prevailing rationality. The new institutionalism breaks with the existing perceptions by rejecting rationality as an explanation for organizational structure and emphasizes that the success and survival of organizations are to be found in organizations' quest for achieving legitimacy rather than efficiency (Tolbert and Zucker, 1983). Institutional theorists recognized that when studying stability, consensus and conformity of institutions was not sufficient in understanding the processes of how institutions are created, diffused, adopted, and adapted.

“(…) [G]radually, the language began to shift from discussions of institutional “effects” to institutional “processes”; and theorists began to craft recursive models, recognizing “bottom-up” modes of influence, to supplement or replace prevailing top-down models (Scott 1995; 2001). (Scott, 2004)

Where “old” institutionalism perceives institutions as the formal rules of behavior and treats them in correlation with the behavior of rational actors, the challenging theory loosens the concept of institutions as well as how they should be understood in relation to organizations and the behavior of individuals.

“Institutions do not merely reflect the preferences and power of the units constituting them; the institutions themselves shape these preferences and that power. Institutions are therefore constitutive of actors as well as vice versa. It is therefore not sufficient in this view to treat the preferences of individuals as given exogenously: they are affected by institutional arrangements, by prevailing norms, and by historically contingent discourse among people seeking to pursue their purposes and solve their self-defined problems” (Keohane 1988:382).

The change of the conceptualization of institutions has led to an absent single agreed definition of what constitutes an institution. Scott (2001) perceives institutions as follows:

“Institutions are social structures that have attained a high degree of resilience. [They] are composed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life […]

Institutions by definition connote stability but are subject to change processes, both incremental and discontinuous” (Scott, 2001:48).

The concept of institutions is thus very wide, and practically any kind of behavioral pattern can be termed “institution,” thus suggesting that organizational structures and practices

“[...] are often reflections or responses to the rules, beliefs, and conventions built into the wider environment” (Powell, 2007:1).

Hence, institutions are the organizational structures and practices that are constituted by the formal as well as the informal conditions that frame and support individual and collective actions. Institutions do not just constrain actors’ behavior; they also establish the very criteria by which actors discover their preferences. Thus, scholars of the new institutionalism pay much more attention to the internal influences and the heterogeneity of organizational responses to institutional pressures, hence increasing the academic focus on the role of “agency” in institutionalization and acknowledging that institutionalization is a political process where success and final form depend on the relative power of the actors who strive to steer it (DiMaggio, 1988):

“[W]hile recognizing that actors are institutionally constructed, it is essential to affirm their (varying) potential for reconstructing the rules, norms and beliefs that guide—but do not determine—their actions” (Scott, 2004:12)e.

The rising awareness of the interrelations between actors and institutions has resulted in alternative theorizations of how to cope with institutional change. The focus is turned towards aspects of cognitive and cultural explanations of institutions and their functions in order to understand how changes in rules, normative systems, and cognitive beliefs reshape organizational fields and how these social structures are changing caused by the power exercised by “subjects.” In order to understand why some institutions persist and others erode or fall into disuse, institutionalists have found it vital to pay attention to the correlations between institutional change and intra-organizational dynamics within a field that emerge when shaping existing or creating new institutions.

2.4 ORGANIZATIONAL FIELDS AND INSTITUTIONAL CHANGE

The development of institutional theory has led to the following problematization of institutional change:

“If institutions are, by definition, firmly rooted in taken-for-granted rules, norms, and routines, and if those institutions are so powerful that organizations and individuals are apt to automatically conform to them, then how are new institutions created or existing ones changed over time?” (Seo and Creed, 2002:222)

In understanding the dynamics and the strategic activities associated with institutional change, it is relevant to introduce the concept of organizational fields. This concept is central to institutional theory since it is a theoretical precondition that organizations are located within fields (Kondra and Hinings, 1998). Fields represent the intermediate level between organizations and society and are considered to be instrumental to processes by which socially constructed expectations and practices become disseminated and reproduced (Scott, 2001).

The concept of fields has been developed in order for institutional theorists to cope with and account for the tensions and contradictions that emerge in the maintenance of existing or rising of new institutions within a specific group of organizations that share an interest in the institutional conditions.

Powell describe how “[a]n organizational field is a community of disparate organizations, including producers, consumers, overseers, and advisors, that engage in common activities, subject to similar reputational and regulatory pressures” (Powell, 2007:3). “Field” expresses those conditions under which the institutional environment shapes actors and their behavior (Zucker, 1988) and is constituted by organizations and professions that share common understandings of social orders or activities:

“The notion of field connotes the existence of a community of organizations that partakes of common meaning system, and whose participants interact more frequently and fatefully with one another than with actors outside the field” (Scott, 1994:207-8).

In its capacity to embrace and represent differentiated, interdependent actors and institutions, fields are considered to reveal a recognized social structure and social life (DiMaggio and

Powell, 1983), and it is a theoretical conviction among institutionalists that it is within this intermediate level that the sources for institutional change are to be found.

Early work on organizational fields concentrates attention on field level development and institutional change by mainly considering fields as domination systems that confine behavior, thus highly neglecting the role of actors and agency. Within this field perspective, studies at the field level consider institutions as being reflections of the prevailing field boundaries. But concurrently with the growing acknowledgement that actors and agency play vital roles in making up institutions and creating institutional change, a different field perspective has emerged. Observing that actors have power and interest in producing strategic activities that affect the process of institutional change, it has become increasingly interesting for scholars to consider micro processes as reflections of the field boundaries. Fields are to be considered as contested centers of debate, “where competing interests negotiate the interpretation of what they each consider as key issues” (Powell, 2007:3), thus allowing strategic activities to emerge in the tensions and contradiction of the field itself.

Powell (1991) provides the following characteristics of institutional change:

“When change does occur [...] it is likely to be episodic, highlighted by a brief period of crisis or critical intervention, and followed by a longer period of stability or path-dependent development. Periods of deregulation, for example, are likely to be followed by an era of consolidation. Major changes often occur when legal or other rule-maintaining boundaries are relaxed” (Powell, 1991:197).

Institutional change is the focal point in contemporary institutional literature, and institutional contradictions are appointed as the driving forces of institutional change, resulting in the questioning of taken for granted elements of social structure and a replacement of other elements that previously were considered illegitimate, unthinkable, or impossible. This points out a central element in studying institutional change and simultaneously enhances the necessity to study institutionalization as a political process: The anchoring of new institutions requires that one or more previously taken for granted, “natural” features of social life are being altered, abandoned, and replaced by another. This has enhanced the academic interest in a so far underdeveloped phenomenon, *deinstitutionalization*, “the processes by which institutions weaken and disappear” (Scott, 2001:182). In a change perspective, *deinstitutionalization* finds

its legitimacy because “it is useful to place studies of deinstitutionalization in a broader context of institutional change, since the weakening and disappearance of one set of beliefs and practices is likely to be associated with the arrival of new beliefs and practices” (Scott, 2001:184).

The notion that institutional fields are centers of debate and consist of several, sometimes mutually, competing interests (Seo and Creed, 2002) that can be contested as actors interpreting beliefs from different perspectives, can result in an ascription of different meanings and perceptions of the institutions within the field. This entails the deconstruction of institutions as an important element in the study and understanding of institutional change since “institutionalization bears, if not the seeds of its own destruction, at least openings for substantial change” (DiMaggio 1991:287). But, these openings will not automatically lead to a breakdown in institutional norms since they require a response and interpretation by actors in order to provide the pressure needed to initiate institutional change. In order for new institutions to rise and take on the required degree of legitimacy, existing institutions must undergo a process of deconstruction and delegitimation by new or existing actors, providing the justification of introducing new norms and practices as an alternative to the existing institution.

The contemporary notion of the interrelations between fields, actors, and change not only signifies that institutional change is a complex phenomenon inseparable from the cognitive and cultural aspects of institution but stresses the importance for scholars to study the existence and emergence of competing interests among actors, thus the conflicts and contradictions leading to institutional change. Accordingly, when studying institutions, it is important to realize that while institutions constrain action, they also provide opportunity for agency and change.

2.5 INSTITUTIONAL LOGICS – COPING WITH INSTITUTIONAL CHANGE

The contemporary perspectives on institutional change have prompted the concept of “institutional logics,” originally introduced by Alford and Friedland (1985) for the purpose of describing the rationales behind ostensibly contradictory practices and beliefs inherent in institutions. They contend:

“Each of the most important institutional orders of contemporary Western societies has a central logic—a set of material practices and symbolic constructions—which constitutes its organizing principles and which is available to organizations and individuals to

elaborate [...] These institutional logics are symbolically grounded, organizationally structured, politically defended, and technically and materially constrained, and hence have specific historical limits” (Friedland and Alford, 1991:248-249).

According to Friedland and Alford (1991), each institutional order can be considered to have an appertaining logic that contributes to individuals’ identity creation and that constrains both the means and ends of individual behavior and are constitutive of individuals, organizations, and society. They view institutional logics as embodied in practices, sustained and reproduced by cultural assumptions and political struggles, which constitute an institutional order of organizing principles that subsequently are adopted, adjusted, and elaborated by the field actors (Friedland and Alford, 1991). Accordingly, institutional logics define the order of a given field since they “define the norms, values and beliefs that structure the cognition of actors in organizations and provide a collective understanding of how strategic interests and decisions are formulated” (Thornton, 2002), thus establishing the foundation for what is considered as rational behavior within a given institutional logic. In this perspective, actors always organize in compliance with the given institutional logic they are embedded, albeit the accepted practices and symbols available are subjects to elaboration and adjustment, triggered by actors’ self-interest.

Thornton and Ocasio (1999) defined institutional logics as “the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (804).

“Institutions constrain not only the ends to which their behavior should be directed, but the means by which those ends are achieved. They provide individuals with vocabularies of motives and with a sense of self. They generate not only that which is valued, but the rules by which it is calibrated and distributed. Institutions set the limits on the very nature of rationality and, by implications, of individuality. Nonetheless, individuals, groups, and organizations try to use institutional orders to their own advantage” (Friedland and Alford, 1991:251).

By addressing the interrelationships between individuals, organizations, and society, the institutional logic approach links the perspectives of institutions in a societal level (macro

level)—focusing on socially constructed institutional practices and rule structures—and those on a level of organizational fields (micro level)—focusing on individual agency and cognition, and socially constructed institutional practices and rule structures (Friedland and Alford, 1991).

The approach heightens how cultural dimensions of institutions both enable and constrain social actions and can be regarded as a response to the problematic issue that actors often are subject to co-existing and sometime competing logics, which encourages different practices and beliefs that ultimately shape and elucidate the interest and behavior within a field, thus actors' strategic activities and involvement in the political struggles of institutionalization.

The concept of institutional logic has been particularly useful in helping researchers identify and explain both institutional continuity and change since logics provide the organizing principals of specific categories, beliefs, and motives that affect how actors conduct themselves and their environment (Friedland and Alford, 1991). Also,

“[t]he notion of logics is immensely appealing. First, it proposes that external rituals and stimuli interact with internal mental structures to generate routine behavior. Second, it is consistent with the view that culture is fragmented among potentially inconsistent elements, without surrendering the notion of limited coherence, which thematization of clusters of rituals and schemata around institutions provides. Third, it provides a vocabulary for discussing cultural conflict as confrontation between inconsistent logics of action” (DiMaggio, 1997:277).

The institutional logic approach influences the way to perceive and study institutional change. Firstly, since there are always several competing institutional logics with different rationalities in a field (Friedland and Alford, 1991), the emergence of conflicts and contradictions is intrinsic since change often originates from the conflicts and contradictions between different institutional logics. These contradictions can potentially achieve the capacity to challenge prevailing interpretations of rational behavior, caused by the reflexive interpretation by those who operate in them. Institutional logics are thus not only defining structures within a field but also revealing the potential for institutional change, as institutional logics structure the cognition of actors and provide a collective understanding of how strategic interests and decisions are formulated. Thus, it necessitates an understanding of how competing logics function in generating a less constrained institutional environment, thus openings for new or

previously institutional constrained actors to introduce new schemas, rules, or norms that potentially become institutionalized.

Secondly, but inseparably linked to the abovementioned, since any identity within a field is a socially constructed product of the prevailing different (sometimes mutually incompatible) institutional logics they are exposed to, an appertaining consequence of actors' elaboration and adjustment of institutional logics is an always impending risk that social identities within an organizational field become contested and unstable. In this way, actors become central in the study of institutional change due to their ability to carry out strategic activities by actively exploiting and initiating the incompatibilities and contradictions between the institutional logics of their field, and hereby producing "[...] new truths, new models by which they understand themselves and their societies, as well as new forms of behavior and material practices" (Friedland and Alford 1991:251). But is also produces a paradox since the actions of actors must be understood as located in an institutional context that both regulates behavior and simultaneously provides opportunity for agency and change.

The heightened academic interest in the actors' important and decisive roles in institutional change processes has approached institutional theory from the perspective of change and has been a driver in understanding institutional change differently. Holm (1995) states that

“[...] neither underlying power structures nor overarching ideologies are the primary explanations. The core institutional insight is that of interaction between practices, interests, and ideas” (Holm, 1995:416).

The focus of institutionalism on continuity, stability, and persistence of institutions has been replaced with a predominant interest in understanding institutional change by studying the field dynamics that call forth the creations, maintenances, transformations, or disruptions of institutions. The new focus on change has sprouted a necessity among scholars in understanding fields as political arenas where power relations are maintained or transformed (Clemens and Cook, 1999; Seo and Creed, 2002), directing an emphasis on studying processes of conflict and struggle within institutional fields in order to understand the role of actors.

2.6 ACTORS BECOMING SUBJECTS IN INSTITUTIONAL CHANGE

In seeking to understand how stabilized meanings and practices become destabilized and replaced by new structures and simultaneously acknowledging that existing structures are considered both real and socially constructed, we need to look into the dynamics of change caused by the actions of actors. The literature on institutional agency thus emphasizes how change is generated due to the influence of actors when shaping social structures and institutions: Thus the contemporary theory of institutional change opens up for inquiry of how actors actively shape, create, or maintain institutions by strategically organizing their activities in favor of the logic(s) supporting their preferences. Having actors as the focal point for institutional change emphasizes the political aspect of institutionalization: Actors, “once they have become reflective and active change agents, mobilize both the other actors and the resources required to bring about social change” (Seo and Creed, 2002:231). Seo and Creed (2002) regard actors as active exploiters of social contradictions and explain how they actively utilize the institutional contradictions caused by the coexistence of incommensurable logics within the field to achieve their political objectives. The forming of new institutions and the rejection of existing are thus highly reliant on the deployment of actors’ capability to carry and produce institutional logics through new forms of behavior and material practices, hence making the occurrence and implementation of institutional change dependent on how actors engage their interest and interpretations of the challenging logic in the institutionalization process of change. Thus, actors are not to be studied as objects of institutional change processes but rather as carriers of institutionalization and triggers of change, and their actions are therefore to be viewed as important contributions in illuminating the political struggles for institutional change since these actions reveal the logics articulated with the purpose of challenging prevailing logics constituting the existing established order.

But although actors have the capability to change or create institutions through strategic activities, studies of institutional change have to incorporate the role of interests and resources, as “new institutions arise when organized actors with sufficient resources see in them an opportunity to realize interests that they value highly” (DiMaggio, 1988:14).

“Although actors can become reflective at any time, the likelihood of a shift in collective consciousness that can transform actors for passive participants in the reproduction of existing social patterns into mobilized change agents increases when

actors continually and collectively experience tensions arising from contradictions in a given sociohistorical context (Benson, 1977)” (Seo and Creed, 2002: 230).

2.6.1 THE SOCIAL CONSTRUCTION OF ACTORS AND INSTITUTIONAL ENTREPRENEURSHIP

In distinguishing between regulative and constitutive rules, Scott (2001) argues that social life and social structures are highly influenced by rules, in principle, similar to those in games. Regulative rules are those defining the legitimate ways of acting in accordance to legislation, company politics, or societal norms and expectations. The constitutive rules, on the other hand, designate the capacities and roles of individuals using socially constructed identities. These social constructions provide individuals, groups, or organizations with certain qualities, expectations, and identities (e.g., parent, CEO, motorcycle club, labor union, or government). These terms are in themselves empowering or identifying for individuals, groups, and organizations, but they solely function as a consequence of the environmental acceptance of the identity, capacities, and qualities entitled to the titles. Thus, using games as exemplification, Scott (2001) argues that “[c]onstitutive rules construct the social object and events to which regulative rules are applied” (Scott, 2001: 64). In our social structure and social life, the constitutive rules are not as visible as those in games because they seem “natural,” are taken for granted, and stand unchallenged. But despite the vague visibility of constitutive rules in society, all actors “[...] depend for their existence on constitutive frameworks, which, although they arose in particular interaction contexts, have become reified in cultural rules that can be important as guidelines into new situations” (Scott, 2001:65). Further, Scott (2001) argues that “as constitutive rules are recognized, individual behavior is often seen to reflect external definitions rather than [...] internal intentions” (Scott, 2001:65). In the notion of actors as social constructions lies the immanent perception that actions of actors are not reflections of human or organizational nature but a result of the constitutive rules framing social structure and social life and defining what interest actors may have, thus constituting and defining the legitimate space for their actions.

2.6.2 THE PARADOX OF EMBEDDED AGENCY

Acknowledging that actors actively constitute social structures through their actions that are themselves socially constructed, and that actors simultaneously have the capacity to change and create new institutions, has posed a paradox for institutional theorists to resolve: “How can actors change institutions if their actions, intentions, and rationality are all conditioned by the very institution they wish to change?” (Holm, 1995: 398). Scott (2001) supports this view by stating that “change poses a problem for institutional theorists, most of whom view institutions as the source of stability and order. If the nature of actors and their modes of acting are constituted and constrained by institutions, how can these actors change the very institutions in which they are embedded?” (Scott, 2001:181)

Seo and Creed (2002) emphasize that the risk of only focusing on agency and interests is an insufficient conceptualization of actors as opportunistic and “unaffected by the institutional embeddedness that shapes both the means (power) and ends (interests) of those actors” (Seo and Creed, 2002:240). They propose to solve the theoretical paradox by addressing how the agency of embedded actors is not constrained by the institutional environment but rather is facilitated by a utilization of the institutional contradictions as platforms for initiating strategic activities that break with existing social structures in the creation of change. Thus, contradictions are both necessary elements as well as driving forces for the strategic activities of actors and “enable a shift in partially autonomous social actors’ collective mode to a reflective and active one” (Seo and Creed, 2002:231). According to this perspective, an understanding of change is to be found not by rejecting the idea that actors are more or less constrained by their institutional environment but rather by focusing on the political interplay between important actors and simultaneously acknowledging that actors have the capacity to act in ways that are inconsistent to the prescribed social structure—thus becoming reflective entrepreneurs who perform strategic activities by exploring and utilizing institutional contradictions within their field.

2.6.3 INSTITUTIONAL CONTRADICTIONS AS IMPETUS THAT DRIVES, ENABLES, AND CONSTRAINS INSTITUTIONAL CHANGE

Seo and Creed (2002) apply a dialectic perspective to illuminate how institutional change is inseparably linked to various inconsistencies and tensions within and between social systems, described as “institutional contradictions,” which “may not only trigger the shift in actors’ collective consciousness but also may provide alternative logics of action and psychological and physical resources to be mobilized, appropriated, and transposed in the process of institutional change” (Seo and Creed, 2002:231). Thus, they state that institutional changes are outcomes of actors’ dynamic interactions of contradictions and propose four sources of institutional contradictions as fundamental forces for creating and driving institutional change:

LEGITIMACY THAT UNDERMINES FUNCTIONAL EFFICIENCY

In order to attain successful institutional change, the efforts invested herein have to gain legitimacy from the institutional environment (DiMaggio and Powell, 1983; Meyer and Rowan, 1977). The aspect of legitimacy in change processes is complicated by the heterogeneous interests surrounding a given logic behind the change initiative. It is unlikely that change processes will be institutionalized unchallenged since change always faces a strong commitment to existing ways of doing things. Consequently, the more actors involved in the change process, the more diverse interests and resources are in risk of being mobilized in challenging the implementation of new structures since the interest of one actor may be threatening the interest of another. As a result, the importance of gaining legitimacy during the process of creating institutional change requires an ongoing negotiation and signing of political and personal compromises among important actors. Seo and Creed (2002) point out the contradiction in actors’ quest for legitimacy from their institutional environment is based on an ambition to gain the needed reputation, resources, and survival chances (Powell, 1991; Seo and Creed, 2002) rather than an ambition of gaining higher efficiency. Thus, Seo and Creed (2002) claim that inefficiency is a plausible outcome of conformity.

ADAPTATION THAT UNDERMINES ADAPTABILITY

Along with institutional isomorphism follows a process of organizational adaption. Seo and Creed (2002) point out the paradox in this adaption since “such adaptive moves make adopters

less able to adapt over the long run” (Seo and Creed, 2002:227). In this paradox lies the assumption that the adaptations made in order to accommodate isomorphism lead to new locked patterns of behaviors and perceptions of rationality, thus undermining future adaptability processes. In other words: adaptive moves make the actors less adaptable, thus more resistant to change. Seo and Creed (2002) put forward the contradiction in adaption by concluding

“[A]lthough institutionalization is an adaptive process, once in place, institutions are likely to be both psychologically and economically locked in and, in a sense, isolated from or unresponsive to changes in their external environments. This unresponsiveness creates a space where contradictions between those institutions and their external environments develop and accumulate over time” (Seo and Creed, 2002:228).

INTRAINSTITUTIONAL CONFORMITY THAT CREATES INTERINSTITUTIONAL INCOMPATIBILITIES

The institutionalization generated through social interactions often takes place in local environments, thus reflecting the interests and translations these local institutional embedded actors produce in their seeking for legitimacy. Local interest thus creates translations and practices that might collide with other local actors’ interests, leading to misalignment and inconsistency between different levels or sectors (Seo and Creed, 2002), thus contradictions within the institution. Also, in the search for legitimacy and stability, actors incorporate different incompatible structural elements, practices, and procedures. Thus, this contradictory element of institutionalization aligns with the abovementioned theory of institutional logics proposed by Friedland and Alford (1991), suggesting that the logics utilized in the institutionalization conform actors behavior but simultaneously are available for them to elaborate, resulting in interinstitutional contradictions as a common part of social life.

“In sum, individuals and organizations are increasingly exposed to multiple and contradictory, yet interconnected, institutional arrangements and prescriptions—all of which are the inevitable by-products of the ongoing social construction of those institutions. Conforming to certain institutional arrangements and the related taken-for-granted behavioral expectations may create inconsistencies and, eventually, incompatibilities with behavioral expectations stemming from institutional arrangements at different levels or in different sectors of society as a whole. More important for our

task, developing a theory of human agency for institutional change, is the view that it is political processes that determine the appropriate relationships among contradictory institutions or which institutional logic should regulate particular social activities” (Seo and Creed, 2002:228-9).

ISOMORPHISM THAT CONFLICTS WITH DIVERGENT INTERESTS

The fourth and final contradiction force of institutionalization is characterized as a product “of political struggles among various participants who have divergent interest and asymmetric power” (Seo and Creed, 2002:229). In this perspective, institutionalization is a reflection of the preferences of the most powerful participants in the political struggle rather than a reflection of a mutually negotiated behavioral rationality.

Seo and Creed point out the contradictory in this as

“the fundamental misalignment between a particular form of social arrangement and the interests of diverse actors who enact, inhabit, and reproduce that social arrangement. Specifically, proponents view those actors whose ideas and interests are not adequately served by the existing social arrangements as potential change agents who, in some circumstances, become conscious of the institutional conditions that leave their needs unmet and take action to change the present order” (Seo and Creed, 2002:229).

2.6.4 INSTITUTIONAL ENTREPRENEURSHIP

The rising interest in actors’ influence on institutions acknowledges that actors are not passive but possess the resources and the power to maintain or transform the institutions that shape the world in which they are embedded. Actors, who deliberately adjust their actions and invest resources in accordance to their interpretations of and interests in the changing or creation of institutions, have originated the concept of “institutional entrepreneurship,” which has been given considerable attention in recent years as the conceptualization of those actors who choose to deploy resources as a support in the creation of institutions that serve their interest (DiMaggio, 1988). Thus, the concept joins institutional and entrepreneurial forces and seeks to provide understanding for how institutions become established, where “institutional entrepreneurs” refers to those actors who involve themselves in creating new institutions or

transform existing ones (Battilana et al., 2009). Institutional entrepreneurship introduces agency, interests, and power as the most important elements in understanding change in an institutional perspective. It emphasizes that institutions are shaped by actors who have interests in engaging in the political conflicts and struggles that emerge within their field in the generation of institutional change.

Battilana et al. (2009) define institutional entrepreneurs as

“change agents who, whether or not they initially intended to change their institutional environment, initiate, and actively participate in the implementation of, changes that diverge from existing institutions” (2009:70).

2.6.5 PRACTICE, MUTUAL NEGOTIATION, AND POWER

Exertion of successful institutional entrepreneurship requires that actors separate their actions from the considered rational behavior in accordance with the dominant institution logics in order to gain legitimacy for the logics introduced in association with the change process. Actors function as powerful “carriers” of change and their interpretations of the regulative, normative, and cultural-cognitive institutions around them shape the process of institutionalizing new rules, norms, or schemas, thus drawing attention to the interplay between actors, actions, and meanings in understanding the field dynamics of institutional change (Townley, 2002).

Institutionalization is highly influenced by the initial and ongoing work done by institutional entrepreneurs in translating the change at the macro level to operationalized structures and practices that are to replace those on the micro level supporting the logic being challenged. In relation to the outcome of institutionalizing change, Lippi (2000) finds the activities on the micro level likely to be more important than those activities taking place at the macro level. Further, Lippi states:

“For institutionalization to occur successfully and for adaptation to take place - never linearly, but always with a certain degree of unpredictability - change must pass through various levels (macro and micro) and must involve different types of actors (supranational, national, sub-national, local, etc.)” (Lippi, 2000:459).

These characteristics of institutionalization of change set up requirements for institutional entrepreneurship. Institutional entrepreneurs must be skilled actors who can interpret existing institutional contradiction and strategically introduce, translate, and operationalize change in order to gain sufficient approval and resources from diverse actors for support and acceptance of their contesting logics that portray an alternative rationality. In the preparation of their strategic activities, institutional entrepreneurs have to theorize change in ways that invite diverse actors to cooperate (Fligstein, 2001; Greenwood, Suddaby and Hinings, 2002; Suddaby and Greenwood, 2005) in the mobilization of collective actions necessary to secure support for and acceptance of institutional change (Fligstein, 2001).

Thus power in a contemporary institutional change perspective is not to be seen as a belonging to certain actors but rather as a product derived through interactions between multiple actors with an interest in destabilizing or changing existing logics by supporting competing logics. This continuous negotiation and mediation of power prompts more or less stabilized alliances of actors, whose coalitions of interests confer legitimacy on certain institutional arrangements as they conform their behavior and practices in accordance to the logics (Zucker, 1988). Accordingly, a weakening of such coalitions caused by inconsistency in behavior and practices or as a consequence of lacking resources invested in the contesting institutional logic enhances the propensity for new agency (Greenwood and Hinings, 1996; Zucker, 1988) as engaged actors see prospects for strengthening their interests, causing internal political struggles and competing interests within the institution under construction. Thus the institutionalization of change is largely shaped by the negotiations and compromises between various actors supporting the change.

3 METHODOLOGY

Methodology is the philosophical foundation and rationale of enquiry from which I derive knowledge of the world and the rationalities of embedded social actors, which is a central element of the study of institutionalization.

First, I briefly describe how benchmarking has been theoretically underexposed in institutionalization studies. Subsequently, I outline how institutional theory facilitates new and important inquiries into understanding institutionalization of benchmarking. I account for how my choice of theory influenced my analytical approach to conduct this study and how institutional theory provides important insight in this study of benchmarking.

Afterwards I present three analytical models that will be applied in this study. These are “Three Pillars of Institutions,” “contradictions,” and “framings.” The presentation will be accompanied by an account of these models’ applicability in a study of institutionalization and their empirical and analytical consequences.

The third part of the chapter accounts for the data collection methods used to conduct the empirical data collection and the appertaining choices that are made based on the account for analyzing institutionalization.

3.1 RESEARCH STRATEGY FOR STUDYING INSTITUTIONALIZATION

Benchmarking is widely considered to be essential to organizational improvement processes (Chen, 2005; Dawkins et al., 2007). The current interpretation of benchmarking has a normative presupposition: that identifying organizational weaknesses and learning and adopting practices from others will improve performance. Simultaneously, it presupposes that any increase in performance is desirable and beneficial (Rasmussen, 2011).

Literature on “benchmarking” reveals that “benchmarking” is perceived and operates in many different ways in various countries and contexts (e.g., Cox et al., 1997; Beatham et al., 2004; Haugbølle and Hansen, 2006; Triantafillou, 2007; El-Mashaleh et al., 2007). The distribution of research topics in “Benchmarking: An International Journal” in the period 1994–2008, indicates the lack of attention for these kinds of research questions: Only 4% of publications were conceptual (Anand and Kodali, 2008) and none addressed how benchmarking was introduced in different industries and had become a legitimate technology from which improvements could be derived.

“I find the predominant research, perceptions and uses of benchmarking valued so strongly and uniformly that it may actually be abstaining researchers and practitioners from studying and questioning benchmarking objectively. I consider the existing benchmarking literature and research as being results of industry’s demand for straightforward guidance (Barrett & Barrett, 2003), which to a great extent ignores the fact that the area of function is a socially constructed world” (Rasmussen, 2011).

As a result, the literature on benchmarking is highly theoretically underexposed, focusing on pragmatism and practice rather than the more sociological issues of implementing such concepts in an industry (e.g. Cox et al., 1997; Bowerman et al., 2002; Moriarty and Smallmann, 2009).

Institutional theory is relevant for this study, as it allows for an analysis that takes the coexistence of multiple interpretations of institutions into account and further addresses the political aspects of implementing new structures in an organizational field. Institutional theory accordingly provides a foundation that facilitates a study of the institutionalization of new structures that are envisioned to influence the institutional environments of the organizational

field. But this theoretical approach also entails some analytical, methodical, and empirical choices for conducting this study, which will be unfolded below.

A study of institutionalization requires an analytical and empirical focus on actors and how they are active in the process of implementing new structures in existing institutional environments. This entails that the implementation and development of new structures are to be understood as consequences of actors' interests in changing or breaking with existing templates for organizing within their institutional context (Battilana et al., 2009). This theoretical point of origin is essential for my analytical approach and choice of empirical data since this entails a extensive focus on "actors," "agency," and "political struggles of the new structures," where actors are considered to have the ability to influence the structures that they are envisioned to be subjected to. Such interrelations between rising institutions and the potential influence of actors accordingly carry a potential for constant transformations, modifications, or even destruction of new structures that are in the process of institutionalization. This entails a methodological issue for studying institutionalization, as structures, yet not institutionalized, are to be considered unstable and contingent on actors' investment of resources in supporting, influencing, or rejecting them as future institutions in the organizational field.

The study of institutionalization thus entails that the macro and micro perspectives are highly intertwined, which affects the empirical and analytical approaches of this study.

On one hand, institutionalization of new structures is to be analyzed and understood at a macro level, where new structures are aiming at constraining actors by displaying one or more templates for organizing in accordance with a dominating interpretation of "rationales of the rising institution." At a macro level, new structures, yet not institutionalized, reflect the perceptions and political interests of those actors who have been most successful in gaining influence on the development of the new structures.

On the other hand, new structures represented in the macro perspective are constantly under pressure caused by the autonomy of actors at a micro level and their capacity to and interests in influencing the institutional context that they are embedded (or prospected to be embedded). This entails a potential widespread diversity and instability of the structures at a micro level since any given actor with sufficient resources and interests in opposing an orientation of the institutionalization constitutes a potential threat of replacing or challenging the attempts to

generate stability and collective interpretation of the rising institution at the macro level. It is thus acknowledged that actors are not only carriers of new structures, but likewise they are important contributors to the forming, thus institutionalization, of these structures.

Analytically, this entails that rising institutions must be understood as attempts to produce and promote “visions” that reflects the interests of those investing resources in the institutionalization, but simultaneously these visions constitute the foundations for political struggles as other actors may invest resources in influencing or rejecting the proposed structures. Therefore, study of institutionalization requires a parallel analysis at the micro level, revealing the underlying causes to political struggles of how to perceive the rising institution at a macro level. With this focus on understanding institutionalization at the micro level, the political struggles constitute central analytical objects for this study since these reveal three central elements that can influence the institutionalization: Firstly, they reveal the political, economical, or ideological interests actors have in the new structures. Secondly, they reveal the political influences actors possess in gaining influence on the institutionalization. And thirdly, they reveal how these actors facilitate their political influence in the negotiations between actors with diverse interests, which ultimately end up constituting the dominating perception of the structures at the macro level.

The strength in analyzing institutionalization as a result of the political struggles and negotiations is that it allows me to understand institutionalization processes as carriers of several coexisting interpretations that are revealed as actors with different strategic and political interests express interest in the institutionalization of these structures. Accordingly, new structures are not represented by a single actor’s interests but instead as characterized as a compromise that takes the most influential actors’ interests into account. This means that I have to consider actors as carriers and triggers of institutional change, which makes their actions essential when seeking to understand institutionalization. I have accordingly constructed my analytical framework in a way that facilitates an analytical handling of several actors who concurrently influence institutionalization of new structures through ongoing political struggles and negotiations. In the following, I introduce “the three pillars of institutions,” “institutional contradictions,” and “framings” as my analytical framework to study my empirical field. Together these constitute a strong analytical foundation to understand how new structures achieve legitimacy, how they consist of contradictory interpretations that can be exploited in

political struggles, and finally how actors engage in such political struggles of the new structures by promoting alternative and/or challenging visions for the new structures.

3.1.1 THE THREE PILLARS OF INSTITUTIONS – A MODEL FOR UNDERSTANDING THE PREREQUISITES FOR INSTITUTIONS

One central prerequisite for institutionalizing new structures is the achievement of institutional legitimacy. A model to understand how structures achieve institutional legitimacy is Scott's (2001) "Three Pillars of Institutions." Scott argues that regulative, normative, and cultural-cognitive pillars each provide crucial, but somewhat divergent, conceptions of what is making up or supporting institutions. "The three elements form a continuum moving from the conscious to unconscious and from the legally enforced to the taken-for-granted (Hoffman 1997:36)" (Scott, 2001:51). He states that, instead of integrating the three conceptions of institutions to one unifying concept, more insight will be achieved in understanding and indentifying the differentiated underlying assumptions, mechanisms, and indicators of each pillar.

The regulative pillar mainly relies on and addresses the aspect all institutional theorists underscore: Institutions constrain and regularize behavior. With its main focus on how "regulatory processes involve the capacity to establish rules, inspect others' conformity to them, and, as necessary, manipulate sanctions—reward or punishments—in an attempt to influence future behavior" (Scott, 2001:52), this pillar represents the legally enforced and conscious aspect of institutions. Having coercion, expedience, and instrumentality as the central ingredients, individuals and organizations are considered to behave instrumentally and expediently when conforming to rules and pursuing their self-interest (in relation to the involved incentive for compliance or punishment for disobedience). The notion that rules are considered to be carried out by force and/or by sanctions enforced either by interacting actors or by an outside actor (e.g., the state) relies on the perception that institutions can largely account for organizational behavior.

The normative pillar places emphasis on "normative rules that introduce a prescriptive, evaluative, and obligatory dimension into social life" (Scott, 2001:54). The role of values and norms are regarded as the primary drivers in creating expectations and obligations. Institutions

are considered to be comprised by the social obligations ascribed to the normative interpretations of roles, role expectations. DiMaggio and Powell's (1983) description of organizational isomorphism as the process by which organizations become more similar to one another can be seen as an enrollment to the normative pillar.

The cultural-cognitive pillar builds on "the shared conceptions that constitutes the nature of social reality and the frames through which meaning is made" (Scott, 2001:57). In this perspective, shared experiences and understandings of reality result in taken for granted ways of acting, and actions are a function of actors' conception of their environment. Thus the "[...] cultural cognitive conception of institutions stresses the central role played by the socially mediated construction of a common framework of meaning" (Scott, 2001:58). In other words: Institutions rely on the meaning social actors attach to their actions, these meanings being socially created through communication and interaction among actors, resulting in legitimacy of institutionalized social practices on a cultural level, as actors construct common symbolic systems and shared meanings as a basis of stability in their social life. Accordingly, "[t]o understand or explain any action, the analyst must take into account not only the objective conditions but also the actor's subjective interpretation of them" and simultaneously recognize "that internal interpretive processes are shaped by external frameworks" (Scott, 2001:57). The cultural-cognitive theorists deviate from normative theorists on how they conceive the establishment of social roles since they see social "roles arise as common understandings develop that particular actions are associated with particular actors" (Scott, 2001:58).

	<i>Pillar</i>		
	<i>Regulative</i>	<i>Normative</i>	<i>Cultural-Cognitive</i>
Basis of compliance	Expedience	Social obligation	Taken-for-grantedness Shared understanding
Basis of order	Regulative rules	Binding expectations	Constitutive schema
Mechanisms	Coercive	Normative	Mimetic
Logic	Instrumentality	Appropriateness	Orthodoxy
Indicators	Rules	Certification	Common beliefs
	Laws	Accreditation	Shared logics of action
	Sanctions		
Basis of legitimacy	Legally sanctioned	Morally governed	Comprehensible Recognizable Culturally supported

Figure 1: Scott (2001)

The three pillars accommodate an important common acknowledgement among all institutionalists: The regulative, normative, and cultural-cognitive pillar does not work in isolation. For example, Scott describes of how federal programs secure local cooperation through “the use of *authority*, in which coercive power is legitimated by a normative framework that both supports and constrains the exercise of power” (Scott, 2001:53) and exemplifies how the regulative and normative pillar can be mutually reinforcing. Accordingly, pure regulation is inefficient, since it posits its function on authority, which is solely an effective coercive power because of its legitimacy—a legitimacy that include elements of regulatory, normative, and cognitive-cultural aspects of institutions in order to be thoroughly explained.

According to Scott (2001), for any structure to gain institutional legitimacy, a well-functioning interplay between the three pillars is required. The model accordingly provides an analytical approach to unfold from which institutional pillars’ new structures find their legitimacy in an organizational field and whether they are successfully accepted as legitimate across all three pillars. In this way, the model is appropriate for this study as it can be used to analyze the institutionalization of new structures through the support they achieve from the organizational field within each of the three pillars.

3.1.2 INSTITUTIONAL CONTRADICTIONS AS AN ANALYTICAL APPROACH TO UNDERSTANDING POLITICAL STRUGGLES

The three pillars of institutions constitutes an interesting analytical perspective of institutionalizing new structures, as these potentially can be the cause of political struggles actors engage in if they do not find the new structures to be reflecting their view of legitimate regulative, normative, or cultural-cognitive aspects of their institutional environment.

I find the theory of “institutional contradictions” applicable in an analytical unfolding of how new structures cause potential contractions that can be exploited by actors to engage in political struggles.

As pointed out earlier, a driving force in institutional change is institutional contradictions, which are exploited in the promotion of new structures when attempting to deinstitutionalize existing structures. The exploitation of contradictions within an institutional environment is

thus an important analytical element in understanding how new structures are propound as legitimate alternatives to existing institutional environments within an organizational field.

But in the same way as actors can exploit contradictions within an institutional environment, they can equally exploit the contradictions within the new structures since “institutionalization bears, if not the seeds of its own destruction, at least openings for substantial change” (DiMaggio, 1991:287). This means that actors can strategically exploit the contradictions that exist within the new structures themselves in order to achieve influence on the institutionalization. Political struggles and the outcome of the political negotiations of new structures are thus highly reliant on actors’ capability to exploit such immanent contradictions within the institutionalization and their engagement and capability to formulate future visions that either support or break with the predominant perceptions.

3.1.3 FRAMINGS – ACTORS’ SOCIAL CONSTRUCTION OF NEW STRUCTURES

The concept of “contradictions” provides an analytical possibility to unfold how new structures are subjected to multiple interpretations and interests of actors and thus are in constant risk of destabilization. “Contradictions” contribute to an understanding of how actors facilitate contradictory aspects within new structures as openings for political struggles where they can gain influence on the institutionalization. But in order to use contradictions as an analytical tool, I need to be able to identify when actors are exploiting contradictions.

The concept of “framings” provides me with a way to do so by categorizing the different meanings that are ascribed to new structures. Framing will be used as a term for how actors attempt to develop and promote a vision that represents their political interests (Battilana et al., 2009). A framing of new structures as a vision illuminates how these are ascribed meaning by different actors who seek to promote or hinder certain orientations of institutionalization of these structures. Accordingly, framings have similarities to the notion of institutional logics. But where logics often are associated with something that is commonly accepted in an institutional environment, framing is maybe best considered as a precursor to institutional logics, where actors attempt to politically organize and formulate their (alternative/contradicting) visions for the new structures but which do not necessarily constitute or result in an institutional logic accepted by the institutional environment.

Having framings as research objects will provide important information of how actors are seeking influence on institutionalization of new structures since framings reveal actors' political motives and their visions of the new structures. Actors propounding framings for new structures do so by exploiting contradiction with the purpose of promoting and legitimizing a social construction of the structures that are in their political interests. Simultaneously, by exploiting contradictions within the institutionalization, they attempt to delegitimize other actors' framing. Accordingly, the framings presented in this thesis are to be considered as the formulations of the political interests actors engage in political struggles with. The content of a political struggle is reflected by the framings at stake, and the outcome of the resulting political negotiations is thus to be considered as the compromise of the framings in play.

In this way, the concept of framings helps managing and unfolding the political struggles between actors by revealing how contesting attempts to rhetorically construct visions for new structures have elements of conformity or conflicts embedded. But in order to structure the analytical application of framings, I take an outset in Battilana et al.'s (2009) methodical presentation of framings as consisting of a *diagnostic framing*, a *prognostic framing*, and a *motivational framing*.

Through the *diagnostic framing*, strategically motivated actors point out the problem that they seek to resolve. They do so by problematizing existing arrangements and explicating the failing of these in order to assign blame. The framing is to be considered as the attempt to delegitimize existing arrangements, which is a necessary prerequisite in elevating the alternative arrangements that the actors are seeking to introduce through the *prognostic framing*. This framing illuminates what the actors consider as a better alternative and superior to those which are not in the interests of the actor introducing the framing. Through this framing, actors attempt to theorize their vision as a legitimate solution to the failings pointed to in the diagnostic framing in order for it to be appealing for potential allies to support. This is done more explicitly through the *motivational framing*. This framing is a strategic element in framing a vision since the formulation of the motivational framing reflects the considerations that are made in relation to gaining the needed support for the visions that are framed. This entails that the framing of a vision is complemented with sufficient compelling elements that make other actors interested in supporting the prognostic framing and thus simultaneously legitimating the diagnostic framing.

Based on the above account for how institutionalization of new structures is reliant on the “Three Pillars of Institution,” “contradictions,” and “framings,” I have constructed a model that illuminates these interactions.

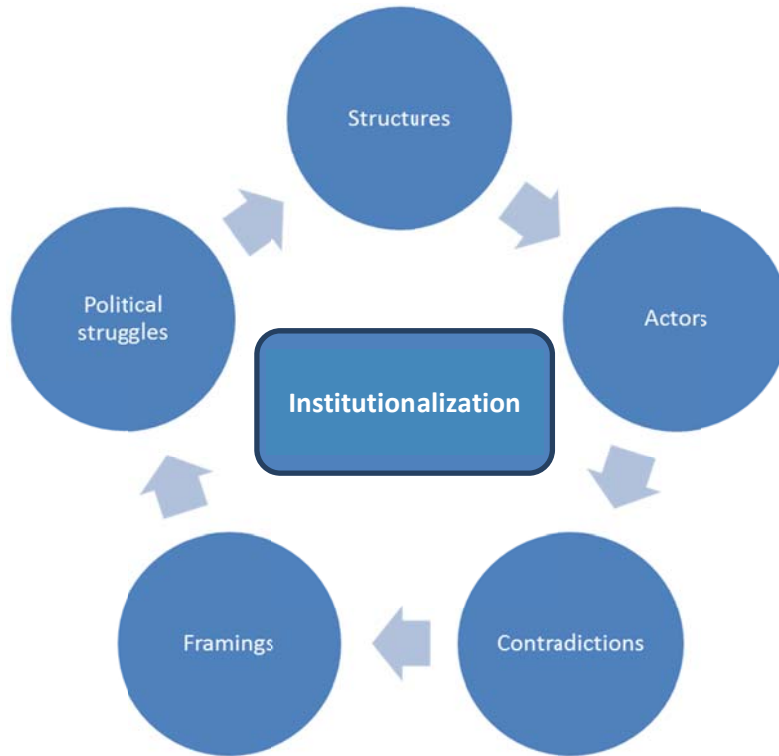


Figure 2: Model showing the process of institutionalization

The models shows how new structures are prompting actors to respond to changes in their institutional environment. They can accordingly resist the structures by exploiting the contradictions within the institutionalization by reformulating and presenting new framings (consisting of diagnostic, prognostic, and motivational framings). This coexistence of different or even diverse framings has the potential to result in political struggles, from which negotiations of the future structures originate.

3.1.4 METHODOLOGICAL CONSIDERATIONS

In summary of the above research strategy, I have argued that institutional theory provides a theoretical foundation for analytically describing how new structures can be institutionalized. As a result of my choice of theory, this entails that my main analytical and empirical focuses

are at a micro level, where actors, agency, and political struggles constitute the most important elements in understanding institutionalization.

I have presented my analytical framework consisting of the “Three Pillars of Institutions,” “contradictions,” and “framings” as being my analytical foundation to unfold how new structures are institutionalized in an organizational field.

My research strategy implies that I, as researcher, take a position from which I can produce an inside view, where I analyze how new structures are perceived by actors within an institutional field. The inside view is particularly suitable in consideration of the heavy analytical weight I have chosen on the micro level, where I consider actors and agency as dominating influents on the institutionalization of benchmarking. This analytical position as researcher allows me to cope with the organizational field as consisting of different institutional environment and contradictions that facilitate and stimulate actors to act in different ways and with different motives. In this way, I write off the perception of actors as institutional “puppets” that base their actions on the institutional conditions they are embedded with. The inside view is thus to be understood as a phenomenological perspective that allows me to conduct my analysis with an outset in how actors perceive themselves and their reality.

In some cases, it may be necessary to construct my analysis as a narrative of a commonly perceived reality among actors. This is mostly relevant in cases of historical accounts about the construction industry, where I consider that it either does not promote the objectives of this thesis to present the field from several actors’ perspectives or where it is not possible for me to get access to an inside view of the field. Further in my discussions, I deliberately choose to describe the field in a more self-perceived objectified manner, where I conclude and discuss the insight I have gained from the inside view.

3.2 DATA COLLECTION METHODS

This part of the chapter outlines my empirical design and data collection in respect to the research strategy for the study. The purpose of this section is to describe and account for my data collection methods and choices of empirical data to conduct a study of the institutionalization of benchmarking.

The first empirical challenge of the study was to identify empirical data from which I could reveal the establishment, original design, and initial interests of benchmarking the Danish construction industry. This required an insight into the historical background and social context from which benchmarking originated. Thus, the initial empirical emphasis was on the historical developments constituting the growing acceptance and support of benchmarking the Danish construction industry that could reveal how openings were exploited within the organizational field and provided a foundation for benchmarking in the Danish construction industry. An empirical interest in this part of the analysis accordingly was to identify how benchmarking became articulated as a provider of legitimate structures that could restructure institutional environments in the construction industry.

The second empirical challenge was to decide which data was necessary to analyze the institutionalization of benchmarking. This required data that could reveal actors' engagement in the institutionalization of benchmarking in the Danish construction industry and the framings they propounded and engaged in political struggles with. The empirical data was accordingly chosen with the aim of illuminating the rationales, interests, and resources actors actively made use of to gain influence on benchmarking. The empirical contribution of such analysis required:

- 1) A mapping of the actors engaging in political struggles and the means with which they did so.
- 2) Data illustrating transformations or conflicting interpretations of the conceptions of benchmarking in the institutional environment.

Since a study of institutionalization is stretched over a longer period of time, I have found written texts and interviews to be most suited as sources of empirical data.

3.2.1 CASE STUDIES

This study is conducted as a case study of the institutionalization of benchmarking in the Danish construction industry. As institutionalization is a process that is not momentary but rather evolves over time, the case study must be considered as a whole and not isolated to specific events or period of times. The context in which benchmarking develops becomes of central importance, as it is these relations and interactions between the case and the environment that constitutes the totality of the case study (e.g., Flyvbjerg, 2011).

In his legitimization of case studies as reliable research method, Flyvbjerg (2011) systematically breaks down five widespread misunderstandings of case studies, these being: 1) general, theoretical knowledge is more valuable than concrete case knowledge; 2) one cannot generalize on the basis of an individual case, therefore the case study cannot contribute to scientific development; 3) the case study is most useful for generating hypotheses, that is, in the first stage of a total research process, while other methods are more suitable for hypotheses testing and theory building; 4) the case study contains a bias toward verification, that is, a tendency to confirm the researcher's preconceived notions; and 5) it is often difficult to summarize and develop general propositions and theories on the basis of specific case studies.

Flyvbjerg (2011) presents the following table that highlights the differences between case studies and statistical methods.

	<i>Case Studies</i>	<i>Statistical Methods</i>
<i>Strengths</i>	Depth	Breadth
	High conceptual validity	Understanding how widespread phenomenon is across a population
	Understanding of context and process	Measures of correlation for populations of cases
	Understanding of what causes a phenomenon, linking causes and outcomes	Establishing of probabilistic levels for confidence
	Fostering new hypotheses and new research questions	
<i>Weaknesses</i>	Selection bias may overstate or understate relationships	Conceptual stretching, by grouping together dissimilar cases to get larger samples
	Weak understanding of occurrence in population of phenomena under study	Weak understanding of context, process, and causal mechanisms
	Statistical significance often unknown or unclear	Correlation does not imply causation
		Weak mechanisms for fostering new hypothesis

Table 2: From Flyvbjerg (2011) p. 314.

Flyvbjerg (2011) argues that when seeking to understand a phenomenon in any degree of thoroughness, case studies are central, as these can (contrary to statistical methods) provide the necessary depth, details, and completeness necessary to understand the contributory causes to the construction of the phenomenon and, further, how to cope with the phenomena prospectively.

The case study, however, entails some implications, as the method calls for a constant iteration between the empirical insight in the field and the research question. This iteration is further

required as the empirical insight has to be converged onto a single theoretical framework (Eisenhardt, 1989). These implications accordingly greatly entail that research where a case study is applied as method respect that the researcher is permitting empirical insight to be a participatory contributor to the research study both in terms of its essence, theoretical framework, and overall purpose.

Case studies involve multiple data collection methods that, together or isolated, provide the empirical evidence for a scientific unfolding of the phenomenon being studied. The key issue is to carefully select one or a combination of several collecting methods that ultimately constitute an empirical foundation for unfolding the phenomenon and define research questions and determine a suitable theoretical framework. I have chosen texts and interviews to be the two data collecting methods for this study.

3.2.2 TEXTS

Texts are useful for this study as they conserve historical information that cannot be reconstructed retrospectively as in the case with interviews. In this way, texts contain information that provides the possibility of unfolding an actual course of events within the given period of time they are written. Texts are to be considered as reflections of the political climate in a specific period of time since they are written with political objectives. What makes this type of empirical data useful is that it does not reflect or consider the subsequent outcomes or consequences of the political debates in which they are facilitated or intended to be facilitated, which is often the case with retrospective reconstructions of the past. A text is then to be analyzed as a description of reality, which is ascribed meaning by the author(s) at the time it is produced. Since texts are primary sources that contain no subsequent interpretations of the subject they address, texts have the quality of reflecting a historical picture at the time of prevailing interpretations of the actions, reactions, and grouping of interests.

I base my selection of text on collecting written empirical data of either explicitly or implicitly concerned benchmarking. The data consist of material from different actors, indicating intension or interest in the benchmarking initiative and its institutionalization.

The texts for this study have been identified through recommendations and references. The study only builds on material that is publicly available.

I have chosen the following written materials as empirical data for this study:

NEWSPAPER ARTICLES

Much of the debate about benchmarking has occurred in newspapers, which is why these texts are an obvious choice to include as empirical data. Newspaper articles reveal the different interests and perceptions actors have had in benchmarking over time. In this way, this empirical foundation has constituted a large part of my empirical data, as such texts reveal the official positions and representations of interests of actors in the Danish construction industry.

GOVERNMENTAL POLICY PAPERS, REPORTS, LAWS, AND EXECUTIVE ORDERS

These texts revealed the governmental interests in benchmarking and the official regulative function that benchmarking was considered to address.

HEARING STATEMENTS AND CORRESPONDENCE BETWEEN AUTHORITIES AND OTHER ACTORS FROM THE CONSTRUCTION INDUSTRY

Such written material illuminated the responses that actors have had to the governmental ambitions of benchmarking and thus simultaneously revealed their interests and oppositions.

SCIENTIFIC REPORTS, PAPERS, AND REPORTS ABOUT DEVELOPMENT INITIATIVES IN THE DANISH CONSTRUCTION SECTOR

These texts have been included as empirical data, as they reveal the foundation from which benchmarking had been articulated as a legitimate development initiative for the Danish construction sector. Despite several requests to the authorities, it was not possible to obtain several governmental documents, correspondences between the ministries, and hearing statements for this study since it was not possible for the authorities to locate these documents. Therefore the empirical foundation has been limited to the written material that has been possible to find on the Internet and libraries, which luckily was of considerable quantity.

VARIOUS MATERIAL FROM THE BENCHMARK CENTRE FOR THE DANISH CONSTRUCTION SECTOR

My employment at the Benchmark Centre provided me a unique opportunity to identify how benchmarking had been communicated to the environment from this central actor. I have

located these documents through the centre's database and chosen empirical data that was not already or sufficiently present in the newspaper articles.

MINUTES FROM BOARD MEETINGS IN THE BENCHMARK CENTRE FOR THE DANISH CONSTRUCTION SECTOR

These were not allowed to include in my thesis, but have supported and verified several hypotheses.

3.2.3 INTERVIEWS

Qualitative research interviewing (Kvale, 1996) has been chosen as a research method on the basis of its ability to generate data about personal insights, attachments, and interests through interaction between the researcher and the respondent. Interviewing can provide supplementary contributions to data collected through texts since the respondent gets an opportunity to illuminate and generate insight in events, thus going beyond data obtainable from written texts. The method allows the respondent to more or less freely address areas he or she finds relevant in relation to the topic and elaborate on why these topics are central to an understanding of the field of research. This particular feature of interviewing enables the researcher to both guide the interview in the direction that is related to the objective of the interview while simultaneously not restricting the respondent in his or her narrative or account of past actions. Thus the method ensures that the respondent stays on topic while creating a space for him or her to express personal interests and interpretations.

My motive for choosing open interviews had a basis in the opportunity it provides the researcher to gain insight into why the respondent has these particular areas of interest in benchmarking and why he or she considered these as relevant for the study and the purpose of the interview.

Since data on past events gathered through interviews are likely to contain contemporary reflections of personal interests and interpretations of the respondent at the time of the interview, such empirical data are to be considered and treated as retrospective constructions of past events—a rational account of past actions from a personal point of view. This entails that I

need to consider interview data as reflecting personal affiliations, involvement, and interests expressed at the time of the interview more than a truthful account of the past.

The selection of interviewees was, at the beginning, done by scrutinizing the texts accounted for above, mainly newspaper articles, and identifying the persons who had appeared several times in the texts and had been active in the discussions about benchmarking. After each interview, I asked the respondent whether he or she could suggest other persons who could support or question certain viewpoints stated during the interview, which could be strengthened by further support or elaborations by others. In the same way, I asked for suggestions for new respondents that he or she would consider representing the opposite view of him- or herself regarding certain topics addressed during the interview. These suggestions pointed in the direction of new respondents for interviewing or functioned as validation of already chosen respondents. Thus the most central persons related to the development of the benchmarking system had been identified, either by snowballing or through review of text, and later narrowed down to fit within the scope of the empirical study. This procedure also entailed, several times, that I deselected potential respondents my interview list, as I found subjects sufficiently elaborated through other interviews. This allowed me to reconsider the list of possible interview persons and select those representing the topics that were still not fully unfolded or elaborated.

Respondents:

- Actors participating in strategic development of the benchmarking system
- Actors who have been active in mobilizing and supporting the logics of the benchmarking system
- Actors who have opposed/worked against the benchmarking system
- Actors who actively seek to mobilize the benchmarking system in order to strengthen their institutional legitimacy, mobilizing and expanding the institutional logics of benchmarking
- Actors who are subjected to benchmarking, these being companies from the construction industry, and constructing a rationality based on the rationales of benchmarking

The list of the respondents is found in Appendix A.

OFFERING ANONYMIZATION AND REVIEW OF TRANSCRIPTION

Early in my empirical data collection I realized that several central persons were reluctant to participate in an interview. Consequently, I feared that even if I managed to persuade people to be interviewed, I would run the risk that they would not speak freely about the subject I would like for them to address. When asked what their reluctance was based on, I got the impression that they were nervous about how their contribution to the study would be communicated. Since it would be difficult if not impossible to anonymize persons who had a central role in the development of the benchmarking system, I decided to offer an opportunity to read the transcription of the interview and rewrite or eliminate statements if necessary.

Another issue emerged as I addressed actors from the private market. Several declined the interview, arguing that they were very interested in contributing to my study, however, they were not interested in being identified as an informant since this was considered to entail potential economic consequences for them. This advanced the idea of anonymization since these actors represented micro actors that were not necessarily directly involved in the political struggles of benchmarking.

Prior to the interview I contacted the person by telephone, and informed him or her loosely about my study, and explained why I found an interview with the person relevant for my project. A common part of the conversation was to account for my employment at the Benchmark Centre and the Centre's interest in conducting a research project that was not constrained by my employment. Afterwards I sent an email with the approved date for the interview and a dense project description as well.

During the interview, in order to offer the most comforting surroundings for the interviewee, I preferred to conduct the interview at their chosen location. I started by summing up some of the formalities, for example, that the interview would take between one and two hours depending on the how much time they had available and the time needed to address the subjects of conversation. Next I introduced the tape recorder and went through the interviewee's rights to be anonymous or read through and change in the transcription of the interview. I began the interview by briefly going through my project and my objectives with the interview as well as the topics I found relevant to address. I explained that the topics were not to be regarded as a

fixed structure for the interview but more as a guideline that I personally perceived as relevant to the interview.

My overall approach was to express my questions or themes as problems for the interviewee to help me solve. Thus the interview was loosely structured based on my knowledge from previous interviews and texts and my own understanding of the development of benchmarking. I did not intervene much during most of the interview but allowed the interviewees to express their own interpretations of the problem as well as account for their experiences of the problem. With a main objective of collecting information of the respondent's interests, perception, and interpretation of benchmarking and its development, I mainly asked open-ended questions that allowed the respondent to address the topics in a way that, as much as possible, reflected their interpretation of the topic. With the same objective, I often confronted the respondent with statements from which he or she could start the conversation.

At the end of the interview, I became more active in addressing topics that I had sensed the respondent either had intentionally or unintentionally been less inclined to address during the interview. In this closing part of the interview, I took the opportunity to utilize the information that I had already acquired from the respondent to formulate questions using a counter argumentation of the claims or positions he or she had expressed.

After the interview I more or less fully transcribed the interview and sent the transcription to those respondents that were not offered anonymization, who were then offered the opportunity to approve or correct the transcription.

3.3 ANALYTICAL STRUCTURE

One of my ambitions is to communicate the analysis with limited use of theoretical concepts. I have made this choice with the aim of communicating the findings in a way that does not discourage people with an interest in the topic from reading the thesis and gaining insight in the institutionalization of benchmarking. I have, however, made extensive use of the concepts of "framings" to organize the arguments. Further "contradictions" and "regulative, normative, and cultural structures" have been included in the analysis and discussions when relevant.

I have furthermore chosen to analyze the institutionalization of benchmarking in a diachronic perspective. I am aware that this choice entails a risk of being prone to identifying framings

with the aim of revealing convergence in the development of benchmarking. I do, however, consider that the pitfalls of conducting my analysis diachronically do not compromise the objectives of this thesis.

My analysis is structured in chapters, reflecting the main political struggles and negotiations that have created openings for introducing or changing the institutionalization of benchmarking. Each section consists of an exposition and analysis of how and which actors have been active in promoting benchmarking or expressed political interests by propounding framings.

I have chosen to analyze the development of benchmarking with reference to what I, due to my three years of research and choice of theory and research strategy, have found to constitute the most dominating political struggles and negotiations. My analytical and empirical choices are made with an underlying ambition of elevating the analysis to a level that reveals which framings are at stake and how they have been facilitated in political struggles about benchmarking. I unfold these political struggles and negotiations through an exposition of the interplay between the actors and framings in play. I find this analytical choice rational since it provides 1) exemplifications of how actors through political struggles and negotiations have influenced the orientations of benchmarking and 2) insight into the institutionalization of benchmarking.

All citations and quotations of texts and interviews brought in the analysis are my own translations. Interviews are available in the original language versions if required but will be destroyed as soon as assessment formalities have been completed.

4 ANALYSIS

In the following I will briefly account for the content of the analysis. The analysis is divided into seven chapters.

The analysis starts out with an exposition of the political foundation from which benchmarking originally arose as a political proposal for a future institution in the Danish construction industry. In this way, the first chapter uncovers how the institutional environment of the construction policy was changing in ways that should end up providing political support for a benchmarking initiative.

The second chapter demonstrates how benchmarking was introduced in the late 1990s as a technology addressing political focus areas from two development programs in the late 1990s. It is argued that the expectations of benchmarking were many and that benchmarking was articulated very broadly and incoherently. As a result, benchmarking appeared as a solution to the wide range of political focus areas.

In the third chapter it is demonstrated how private actors from the construction industry attempted to take control over the institutionalization of benchmarking by establishing an Evaluation Centre (Byggeriets Evaluerings Center, BEC) from which benchmarking was to be developed and disseminated to the construction industry.

The fourth chapter demonstrates how benchmarking was concretized into a benchmarking system and articulated to address several political focus areas for the construction industry. BEC accordingly became a political arena where many local perspectives and strategic interests had to be managed. These conditions for developing and concretizing benchmarking resulted in challenges for constructing a mutually accepted institutionalization of benchmarking.

The fifth chapter is about the operationalization of benchmarking and demonstrates how the concretizing and implementation of benchmarking gave rise to reactions from different actors with different and diverse interests in the benchmarking initiative. Political struggles emerged as actors expressed diverse political interests in the institutionalization of benchmarking. The

political struggles accounted for in chapter five constituted a powerful political pressure and called for transformations of the institutionalization in order for benchmarking to attain institutional legitimacy.

The political pressures ended up radically transforming the institutionalization of benchmarking. This transformation is accounted for in chapter six. As a result of the transformation, private construction companies were provided an opportunity to influence the future institutionalization. Additionally, and related to the construction companies' influence on the institutionalization, competitors to BEC emerged. This competition entailed implications for how to perceive the instrumental purposes and overall objectives for benchmarking.

Having the construction companies as important carriers of the institutionalization, the final chapter of the analysis uncovers how benchmarking is understood and interpreted among the practitioners in the construction industry. The chapter reveals how the benchmarking institution is incorporated in their experienced reality and demonstrates the interplay between and different interpretations among practitioners that benchmarking gives rise to.

4.1 THE ESTABLISHMENT OF NEW CONSTRUCTION POLITICAL FOCUS AREAS FOR THE DANISH CONSTRUCTION INDUSTRY

This chapter provides an understanding of the foundation from which benchmarking originally arose as a political proposal for a future institution in the Danish construction industry. In this way, the chapter uncovers how the institutional environment of the construction policy was changing in ways that should end up providing political support for a benchmarking initiative.

Changes in the political climate starting in the late 1960s positioned quality and productivity high on the construction political agenda. During the 1980s the political development activities greatly addressed the lack of quality and productivity in the construction industry. In the 1990s a political reformulation of the construction industry occurred, which transformed the, at the time, prevalent conception of the construction industry as a sector that accomplished and accommodated societal needs. The political reformulation of the construction industry entailed a market-oriented construction policy that could cope with and strengthen the construction industry in an international competition. Two significant changes of the political climate occurred during the 1990s. The first change was an unprecedented inclusion of private actors in the development of construction political initiatives, as a closer collaboration between public and private actors was considered to be a prerequisite for generating sufficient changes in the construction industry. The second change was a consequence of the more market-oriented construction policy and called for a transformation of the role that construction clients had been playing in the construction policy until then. The changed political climate called for clients, both private and public, to act as demanding consumers and, in this way, drive the development of the construction industry towards a market that accommodated the demands from the clients. The conception was that clients could provide the economic incentives to influence the development by placing demands on the quality of the buildings and, in this way, drive construction companies to adjust their products and processes for the purpose of strengthening capabilities, innovation, and competitiveness within these requests from the clients.

The lack of demand-driven development of the construction industry was accordingly a central diagnostic framing that had to be addressed, and clients needed to be better equipped to articulate their demands and choose the best collaborators. This requirement called for a prognostic framing that could strengthen and qualify clients in making demands that

potentially would increase productivity and international competitiveness, as it was expected that the construction industry would be enhanced as contractors, architects, consulting engineers, and suppliers would accommodate the demands from those financing the building projects. Higher transparency of the products and services became a central political issue as it was through transparency that clients could both select their best collaborators and also drive the private companies to pursue the best performances of the construction industry.

These two significant changes of the development of construction political initiatives provided a legitimate opening for introducing benchmarking in a prognostic framing, addressing the diagnostic framing of lack of transparency and the strengthening and qualification of clients as demanding consumers.

4.1.1 THE CONSTRUCTION POLITICAL CLIMATE IN THE PERIOD FROM THE 1960S TO 1990s

From the late 1960s and up until the end of the 1990s the Ministry of Housing was the initiator of a recurring criticism of the construction industry and succeeded in establishing a common recognition of the construction industry as being insufficient in producing satisfactory quality and productivity. Driven by a governmental interest, this framing of the construction industry was produced and penetrated the construction policy.

Starting from the late 1960s a persistent diagnostic framing of the Danish construction industry emerged, which criticized the large amount of building failures and defects reported from the erected buildings of the 1960s and 1970s. (By- og Boligstyrelsen and Erhvervsfremmestyrelsen, 2000). These failures and defects subsequently led to a comprehensive amount of building damages and repair work resulting in price-raising activities and, in the end, affecting the productivity and profit ratio of the construction industry (e.g., EBST, 2004).

Despite the generally accepted criticism of the construction industry as underperforming on productivity and quality, it was also commonly recognized that the knowledge necessary to prevent most of the registered building defects and failures was present within the construction industry. In this way, the area of weakness was identified as lack of motivation for actors to engage in activities that could elevate the overall performance of the construction industry (By- og Boligstyrelsen and Erhvervsfremmestyrelsen, 2000). Actors within the construction industry were accordingly not considered to possess the incentives to break with the institutional environment in which they were embedded. Something needed to be done in order to establish a change of attitude since the efforts put into assuring good quality buildings was insufficient, and the lack of productivity and many defects was considered to counteract societal interests. The problematization of the construction industry gave rise to a prognostic framing that greatly influenced the institutional environment of the construction industry for many years, suggesting the need to facilitate state construction activities as a strategic element in achieving influence on the development of construction political areas of interests.

This narrative has been presented many times during the years and must be considered to be highly institutionalized among scholars, practitioners, and regulators of the Danish construction

industry. But who propounded this criticism, and how was the construction industry problematized more specifically? And further: What did these initial articulations give rise to in the subsequent development activities of the construction industry? These questions are important for this thesis, in order to fully understand the premises from which benchmarking originated. It is essential to know that the institutional environment was affected by this persistent problematization of the construction industry and that it, much later, produced the political foundation for introducing benchmarking as a legitimate development initiative.

The emerging critique was clearly stated in 1969 in “The construction report” (da. Byggerapporten). The report was ordered by the Minister of Housing based on the rising debate about the lack of productivity and efficiency in the construction industry and was produced by the independent company, Danish Building Information Centre (da. Byggecentrum). The Ministry of Housing required an intensive enquiry into the construction industry that identified the conditions that were causing inefficiency and cost increases. An appertaining expectation to the report was recommendations as to how the state could actively help in increasing the productivity of the construction industry (Byggecentrum, 1969).

Supporting conclusions from the following years prompted the government to adopt Law no. 228 of May 19, 1971, the “Law of State Construction” (da. Statsbyggeloven), which distinctly engaged the state in development activities in the construction industry that aimed at improving the performance and development of the construction industry. This was done by organizing the state’s comprehensive and continuous construction activities as strategic elements that introduced and tested new construction material and methods. As part of this ambition, the Danish government formed the Danish Building Development Council (da. Byggeriets Udviklingsråd, BUR) in 1971. By Law no. 229 of May 19, 1971, BUR was to attend to developing and coordinating the efforts put into research and development in order to enhance quality, productivity, and competitiveness of the construction industry. In this way, BUR was to survey and improve the framework conditions for the constructions industry by providing propositions and launching initiatives that would improve:

- Quality of buildings
- Productivity and competitiveness at a national and international market
- The organization of the construction process
- An effective service of buildings

- Sustainability, comprising a limiting of the overall resource consumption of the construction sector
- The quality of urban areas (§1, stk. 2)

Through the 1980s BUR launched a series of pilot projects and initiated a broad range of enquiries and reports addressing the six focus areas above. Accordingly, the two focus areas—“quality” and “productivity”—were incorporated in a parallel governmental agenda addressing the organization of building processes, service of building, sustainability, and urban areas (Gottlieb, 2010).

In 1983 BUR restated that the efforts put into reducing building failures and defects in the Danish construction industry were insufficient (BUR, 1983). This diagnostic framing was further articulated and enhanced in 1986 by the circular of quality assurance as a part of the Quality Assurance and Liability Reform (da. Kvalitetssikringsreformen) from the Ministry of Housing. Based on these conclusions, the reform constituted a prognostic framing by demanding, standardizing, and formalizing quality expectations and documentation to companies participating in state or social housing building projects through a number of rules of quality assurance. The circular was loosely formulated by the following requirements aimed at securing that available technical and organizational knowledge was utilized:

- Any party in a construction project must quality assure their activities.
- During the construction process and in connection with the handing over process, an effective control of the overall quality must be completed.
- Operation and maintenance of the building must take place according to a fixed schedule.
- Five years after the handing over process, an inspection of the building must be accomplished.
- Consultants, contractors, and suppliers are bound by a five-year period of liability of failures and defects,
- An independent, non-profit, insurance institution, The Danish Building Defects Fund (da. Byggeskadefonden), must be initiated as an administrator of insurance against defects in all state financed or subsidized building activities (Byggestyrelsen, 1986).

Accordingly, the circular consisted of a number of overall stated objectives that were not followed up by specifications of the methods to achieve these, thus leaving a space for companies to design the specifications of quality assurance. In this way, the more practical aspects of the initiative in developing the formal procedures for controlling and documenting the quality of buildings were entrusted to the actors involved. The circular was a way to utilize governmental building activities to generate a foundation for initiating new behaviors and perceptions of quality in the construction industry. By applying the circular to all government-financed building projects, the ambition was that it, over time, would spread to the private market, thus formalizing the procedures to determine and secure satisfactory quality. Such facilitations of the governmental financially supported building projects were further strengthened in 1989 as the Ministry of Housing enacted a development quota entailing that a part of the governmental social housing scheme was reserved for experimental projects that could advance product or process development (Bertelsen and Nielsen, 1999).

By initiating a number of analyses and reports documenting the inadequacies of the construction industry, the Ministry of Housing appeared as a central strategic actor in this preliminary articulation of the construction industry (Bonke and Levring, 1996; Bang et al., 2001). By following up the diagnostic framing of the construction industry through concrete initiatives, such as BUR, the Law of State Construction, and the Quality Assurance and Liability Reform, and reserving resources and government-funded construction projects for experimental projects, the Ministry was a driving force in the initial attempts in formulating the strategic orientations to pursue in securing the future development of the construction industry. The notion of facilitating state construction as a lever for improving the construction industry and disseminating development activities highly influenced the politically initiated activities of the 1990s.

4.1.2 RECONFIGURING THE CONSTRUCTION POLICY

The construction policy of the 1980s can be understood as an attempt to gain a certain degree of legitimacy of the state building activities as driving forces in generating changes in the construction industry. The development activities of the 1980s were mainly based on an anticipation of overall improvement of the construction industry through development activities and peripheral regulation and involvement of private actors in state building projects. The

motivational framing accordingly reflected governmental interests in the construction industry more than it reflected motivational elements for private actors. Accordingly, up until the 1990s the launched political initiatives did not directly reflect a prognostic framing addressing the lacking motivation for actors within the construction industry to engage in the development activities and formulation of the construction policy since the development activities and construction policy only vaguely included actors from the private market in formulating an alternative vision for the construction industry to pursue. Thus the motivational framing of the 1980s was highly reflective of a governmental interest in addressing the heavy criticism that was raised against the quality and productivity of the construction industry.

The Ministry so far did not succeed in constructing a framing of the construction industry that motivated private actors to voluntarily carry out the development activities of state construction. This motivation must be perceived as a highly prioritized area for the Ministry of Housing since it was a prerequisite that the initiated activities in state and social housing building projects were disseminated to the private market in order to generate effects in the construction industry as a whole. But throughout the 1980s an acceptance of state construction as a driver for development had nevertheless gained some degree of acceptance among private actors and provided a foundation for destabilizing the institutional environment in a way that entailed support and interests for private actors to engage in future development activities and gain influence in the orientation of the development.

New framings of the construction industry were created from the beginning of the 1990s, as private actors were included in the construction political development activities, and hence reformulating the framings of the 1980s.

THE INCLUSION OF PRIVATE ACTORS

By mobilizing private companies and professional associations in initiated construction political development activities in the 1990s, a large number of new actors were engaged in establishing change in the construction industry.

Still with an aim of addressing the low productivity increase and large amount of building failures and defects, the inclusion of private actors, together with individual responses to the challenges that needed to be addressed, prompted a growing diagnostic framing of the construction industry as insufficient in competing on the international market.

The two reports, “The resource consumption and distribution in construction” (BUR, 1990) and the “Double Up” reports, from the early 1990s (F.R.I., 1990) pointed to coordinated sector development activities as solutions to generating higher competitiveness on the international markets. These proposals constituted a prognostic framing that partly relied on the continuation of development activities but also emphasized a necessity to produce a coherent orientation of the development activities.

A report from 1991 by the Danish Agency for Trade and Industry concluded that the Danish industry needed a new industrial policy paradigm in order to survive the competition within the European Community (Industri- og Handelsstyrelsen, 1991; Jensen, 2011). In the following years, 1992–1994, the Danish Agency for Trade and Industry produced “The Resource Area Analysis” (da. Ressourceområdeanalysen) triggered by the arguments in the 1991 report. The Resource Analysis Report divided the Danish industry into eight resource areas, representing 90% of the Danish market (Erhvervsfremmestyrelsen, 1993). One of the resource areas (Bygge/Bolig) addressed the construction industry and characterized it as a central area that was counteracting overall national economic interests, thus bringing increased governmental focus to the development of the construction industry.

The Resource Area Analysis Bygge/Bolig was produced by a broad consortium, including the Danish Building Research Institute, “Nellemann, Nielsen og Rauschenberger” (a consulting engineering company), The Danish Technological Institute, Copenhagen Business School (da. Handelshøjskolen), and a small industry consultant. Further, a reference group was associated to the consortium, comprised of all major organized interests within the industry (Erhvervsfremmestyrelsen, 1993:8).

The analysis identified four main challenges that needed to be solved in order to improve the productivity and that were hindering the Danish construction industry’s ability to compete in an international market:

The cooperation challenge

The coordination between the companies in the construction part is based on a traditional trade-specific work division. Vertical integration in cross-project collaboration is necessary to obtain the required productivity-gains.

The innovation challenge

Strategic product and process development is highly limited within the construction part. The potential for innovation-initiatives and information-sharing between the construction part and the industry part are not exploited.

The internationalization challenge

The companies of the construction part lack competences and equity to meet the demands of the international market.

The transition challenge

The companies have to a too limited extent converted their actives and products to target the increasing market for refurbishment.

Table 3: Main challenges for international competition (Erhvervsfremmestyrelsen, 1993:13)

The nomination of Bygge/Bolig as an important resource area for society entailed a strong focus on the development of the construction industry, as the construction industry to a greater extent than previously was considered to be of great economic importance due to its massive inclusion of Danish workforce and potential contribution to the national economy through productivity improvements. The Resource Area Analysis accordingly provided a new strong legitimate platform from which construction political development activities could be initiated (Gottlieb, 2010; Jensen, 2011). These changes of the political climate should show to have an important impact on the following initiated construction political development programs and orientated the already established critique on lacking quality and productivity increase towards an insufficient international competitiveness.

The lack of productivity that was hindering the construction industry from competing on an international market was articulated into a diagnostic framing, characterizing the construction industry as lacking productivity development compared to other industries. In this way, “industrialization” became a new political issue:

“It is specifically characteristic of the resource area of Bygge/Bolig that production takes place in varying collaborative arrangements, with a new production site every time. It is furthermore characterized by one-piece order production, just as the productivity development has been lower than in the industry, and Bygge/Bolig has, despite a certain industrialization still strong traces of craftsmanship” (Erhvervsfremmestyrelsen, 1993:10).

The quotation reveals how the construction political areas of interests changed from having a focus on attending to societal needs towards an overall concern of the construction industry’s inability to compete on an international market. The lacking productivity was closely linked to new focus areas, such as lacking industrialization, inexpedient organization of production, and a high degree of craftsmanship, which constituted the dominating diagnostic framing of the 1990s: Deviations from general industrial productivity conditions caused the low productivity in the construction industry.

The Resource Area Analysis suggested three development programs that were to be carried out in the following years: Project Refurbishment, Process and Product Development in Construction, and Project House. The initiation of the programs was the beginning of a close collaboration between the Ministry of Housing, the Ministry of Trade and Industry, and several private actors and professional associations from the construction industry. This inclusion of private actors in the development activities reflected a shift from the development activities of the 1980s, which was primarily conducted under the auspices of the Ministry of Housing. The reformulation of lacking productivity in a new diagnostic framing was broadly supported by professional associations of the construction industry and appealed to a closer collaboration between public and private actors in the execution of the development programs and formulation of the future diagnostic and prognostic framings of the construction industry.

PROJECT REFURBISHMENT

Budget: 300 million DKK

In 1995 the Ministry of Housing initiated one of the biggest Danish development initiatives for the construction industry so far, involving more than 150 Danish construction companies and more than 600 individuals up until 1997. The program targeted refurbishment and covered around 100 renovation projects of different sizes within refurbishment and urban renewal. The main objectives were productivity improvements of the refurbishment market that could strengthen the Danish construction industry in an international competition on this market. The focus areas were: the processes of refurbishment, product development, international demonstration projects, and ecological urban projects. The pilot projects were highly experimental, and the focus on how to achieve improvements was very diverse (Jensen, 2011). While some projects were very technical and treated the development of building systems and components for the refurbishment market, other projects addressed the construction process by testing new forms of procurement and collaboration and new design and planning methods. Additionally, another category of projects was concerned with the utilization of ICT in refurbishment (EBST and Socialministeriet, 2004).

PROCESS AND PRODUCT DEVELOPMENT IN CONSTRUCTION

Budget: 50 million DKK

This development program was managed by the Agency for Trade and Industry and proceeded from 1994 to 2001. The program was a clear demonstration of the Ministry of Trade and Industry's new engagement in construction political areas that was traditionally considered to be handled by the Ministry of Housing. The program was established at the request of BUR and F.R.I., as the program suggestions were based on the conclusions from both the Resource Area Analysis, the "Double Up" report from F.R.I. (F.R.I., 1990). and "The resource consumption and distribution in construction" report from (BUR, 1990) regarding the vague vertical integration in construction processes and in the construction sector in general. The program concluded on a holistic delivery and value chain as a solution to the inexpediciencies of the traditional forms of collaboration and organizational structures (Clausen, 2002). Thus one aim was to increase the productivity through long-term collaboration and industrialization. Accordingly, four consortiums consisting of contractors, architects, engineers, and manufacturers were established and represented a relatively clear division of tasks for the development activities and testing in the program. During the period 33 pilot projects were carried out. The areas the four consortiums were addressing were the production of wood-based

tower blocks, the integration of architecture and industrial production, industrialization by modularizing the building into prefabricated elements, and finally, new processes in the planning and construction processes (Erhvervsfremmestelsen, 2001:23).

PREPARING THE GROUND FOR PROJECT HOUSE AND BENCHMARKING

It was clear that the initial diagnostic framing from the late 1960s up until the late 1980s of the construction industry as an industry with insufficient quality and productivity performance penetrated the following development initiatives. However, a new and broader motivational framing that included private actors in the development activities was constructed and should show to be highly strengthened as the political climate supported this collaboration between public and private actors.

The first indication of this strengthening took place as the Minister of Housing formed “The Construction Political Forum” (da. Byggepolitisk Forum) with the main responsibility of strengthening the dialog between the professional associations in the construction industry and public actors in order to determine and develop political initiatives for the construction industry in an unprecedented, close public-private collaboration. It was an explicit ambition that the quality and productivity issues that were counteracting the international competitiveness of the construction industry were to be solved in a joint collaboration between all actors of the construction industry. In the following years several new actors rearticulated the framings of the construction industry.

The call for closer collaboration between public and private actors got extra momentum, as the Ministry of Housing was coerced to respond to a report of the National Audit of Denmark in 1997. The report embraced an evaluation of the efficiency and productivity of state construction and included an investigation of the organization and handling of state construction projects. The National Audit identified several cases where governmental agencies did not fulfill the intentions of the Law of State Construction regarding economical responsibilities and the need and function assessments prior to the construction projects. The identification of agencies’ significant differences in the handling of construction projects led to a hefty critique of state clients and their consultants for a number of offences. The overall critique was directed at the Ministry of Housing, who was responsible for the regulations and managing the coordination of the state construction projects. The Ministry was accused of not

being active enough in securing an expedient organization and management of state the construction projects.

“In summary the National Audit finds that it ought to be considered which construction and administrative tasks should be administered by the state, and how the handling of tasks in state construction projects should be organized” (Rigsrevisionen, 1997).

“The National Audit concluded that the state administration of state construction does not accommodate the intensions of the Law of State Construction, and that parts of the governmental construction administration are not sufficiently efficient [...] The control of the investigated projects were insufficient and the management tool were inadequate” (Rigsrevisionen, 1997).

The report coerced the Ministry of Housing to respond to the criticism and later that year the ministry released “The 1997 governmental construction report” (da. Byggepolitisk Redegørelse) (Boligministeriet, 1997), which articulated the construction industry into a governmental program, “Denmark as pioneer country.” An important statement was that the initiatives were to provide more coherence and stability in the future development activities for the construction industry and that this was to be achieved through an increased collaboration between the actors of the construction industry. The inclusion of actors from the construction industry was accordingly established as a focal point in the preparation of the governmental construction policy. Additionally, the Ministry of Housing constructed a new prognostic framing that should show to be persistent in the following construction political development activities, as the report outlined that the future construction political development activities to a greater extent were to benefit the consumers. In this way, the report pointed at the consumers and the clients as key elements in driving the development of the construction industry towards a closer and more efficient collaboration and interplay between the public sector, the construction companies, and the clients. The conception was that consumers and clients could create the economic incentives to influence the development by placing demands on the quality of the product (the building) and, in this way, drive construction companies to organize their products and processes for the purpose of strengthening capabilities, innovation, and competitiveness within these requests from the consumers and the clients.

“This will benefit the consumers in the form of better and cheaper construction prices, and it will benefit the companies who will improve their competitive performance. Additionally, the government considers that a new orientation of the framework conditions of the construction industry in the longer run will create the foundation for a more stable development of the activities in the construction sector” (Boligministeriet, 1997).

This idea of restructuring the construction industry by strengthening the consumers’ and clients’ positions was further supported by The Academy for Technical Sciences (da. Akademiet for de Tekniske Videnskaber) in 1997, in a report claiming “that consumers would increasingly regard housing as just another mass consumption product and the political system will seek increases in productivity and improved quality” (Kristiansen et al., 2005:504)

Based on the Governmental Construction Report and addressing the hard criticism from the National Audit, the Ministry of Housing released an action plan in 1998 for the construction industry (By- og Boligministeriet, 1998), which included experiences from the two development programs, Project Refurbishment and Process and Product Development in Construction. The action plan called for clients, both private and public, to act as change agents and become the driving forces in the creation of changes within construction. This strategic utilization of clients was prompted by one of the identified barriers in Process and Product Development in Construction which concluded that there was a lack of demands for industrial solutions.

“The client has a central role in the construction industry and can contribute to increased quality in the construction process in general by placing specific demands on products and services. The client should in other words act as ‘the critical and demanding consumer’” (By- og Boligministeriet, 1998:9).

The diagnostic framing of the construction industry was thus shaped around the conception that the existing relations between clients and their collaborators were not expedient in terms of developing of the construction industry towards higher productivity. Transformations of these relations needed to be constructed in ways that could provide incentives for private companies to reorganize their products and services to meet the demands of clients.

This new political ambition of “development through demands” ended up influencing the Danish construction policy in many years, and, as the next chapter reveals, also provided openings for suggesting benchmarking as a political development initiative.

4.2 INTRODUCING BENCHMARKING AS A RESPONSE TO POLITICAL FOCUS AREAS

The changes of the political climate during the 1980s and 1990s had constructed a necessity for formulating a prognostic framing that could both cope with the inexpedient relations between actors in the construction industry and could further accommodate the needs for strengthening clients in making demands to the construction companies.

This chapter demonstrates how benchmarking was introduced in the late 1990s as a technology for addressing political focus areas from two new development programs in the late 1990s: the construction political task force and Project House. It will be argued that the expectations of benchmarking were many and that the prognostic framing of benchmarking became very broad and incoherent, as the technology was incorporated widely into the work of the two programs. As a result, benchmarking appeared as a solution to the wide range of diagnostic framings of the construction industry treated in the task force and in Project House. The broad and incoherent prognostic framing of benchmarking accordingly led to ambiguities and diverse interpretations of this new technology.

4.2.1 PROJECT HOUSE

As the third proposed program in the Resource Area Analysis, Project House was initiated in a close collaboration between the Agency for Trade and Industry and the Ministry of Housing in 1998. The program was scheduled for a ten-year period of time and intended to integrate the experiences of Project Refurbishment and Process and Product Development in Construction into clear and operational development activities. Thus Project House was an attempt to integrate and orientate the provisionary and rather scattered development activities of Project Refurbishment and Process and Product Development in Construction towards more operational and corresponding initiatives. Besides this objective, Project House further carried two ambitions from the past development programs and governmental reports.

Firstly, Project House was to scrutinize the possibilities for increasing productivity through increased industrialization. Secondly, the program carried the conception of “development through clients’ demands” by pursuing an appropriate organization of the construction industry through a professionalization of clients in making demands that could entail products and services that to a higher degree complied to their demands (By- og Boligministeriet, 2001). It was a clear ambition that clients in the public, social housing, and private sectors were to undertake the development by: a) acting as professional purchasers; b) obtaining better knowledge about the inner and outer qualities and values of buildings; and c) undertaking management, steering, and control functions in relation to the other actors (By- og Boligministeriet, 2001:13).

The initial preparations of the experimental projects that were planned to be executed in Project House were carried out in ten theme groups. Project House carried on the ambition of including private actors from the construction industry in the development activities, and the Ministry of Housing thus appointed clients, contractors and tradespersons, architects and consulting engineers, manufacturers of construction products, and professional associations from the construction industry to participate in the theme groups.

The main objective of Project House was ambitious: “Double value for half the price.”

“The program is intended to contribute to enhanced efficiency and simultaneously improve quality—technically as well as architectural. The overall aim for Project House is that in 10 years it is possible to complete building projects in the same standard as

successful projects of today. Additionally, the aim is that future building projects will more precisely accommodate the demands of clients, representing double value compared to the buildings erected today” (By- og Boligministeriet and Erhvervsfremmestyrelsen, 2000:140).

Lacking knowledge about the correlations between the initiated development activities and the gain in productivity and quality was an issue that had emerged through the experiences from previously executed experimental projects. A future documentation of these correlations was considered as one of the main issues for achieving the requested improvements of the construction industry (By- og Boligministeriet, 2000a; Interview Bertelsen). This entailed that the objective of “double value for half the price” should prove to be a particularly important factor in introducing benchmarking since the objective required a so far unprecedented effort in documenting and assessing the effects of experimental projects. As a result, one of the theme groups, theme group 10, “Quality management of experimental projects,” was appointed to attend to documentation and evaluation of Project House experimental projects by providing the foundation for defining measures for the other nine theme groups and documenting the effects of these in the experimental projects.

With this overall ambition of creating products that ensured quality management by documenting the effects of the initiated development activities and also facilitating the exchange of experiences and knowledge to the Danish construction industry, theme group 10 was expected to develop three products:

- Quality management of innovation in Project House
- Data sheet and key performance indicator system for productivity
- Quality management of experimental projects

Unlike the other theme groups, theme group 10 was not granted resources for external consultancy. Accordingly, The Danish Building Research Institute (da. Statens Byggeforskningsinstitut, SBI) offered their support consisting of ad hoc assistance from senior researcher Niels Haldor Bertelsen from the research group Development of Productivity and Quality for Construction (da. Byggeriets Produktivitet- og Kvalitetsudvikling) established in 1997. Based on a request from the Ministry of Housing, the research group was assigned the task of developing an evaluation model and providing quality standards for building projects.

The work was concluded by the report “Method for quality assessment of social housing building projects” (da. Metode til kvalitetsvurdering af alment boligbyggeri). Structural quality, sound technical quality, environmental reports, overall economy, and architecture were argued to be the most important factors in an assessment of the overall quality of the building (SBI, 2001). The expected future application of the model was high and reflected a very concrete utilization of the model as a means to generate transparency of quality performance:

“The model is intended to be included in the documentation and control of experimental projects in Project House. In the longer run, the intention is that clients, end users and participants in the building project will use the model as a more general tool for assessing and evaluating the standards and quality of buildings” (SBI, 2001:4).

4.2.2 THE CONSTRUCTION POLITICAL TASK FORCE

Concurrent with the initial preparations of the experimental projects in Project House, the Ministry of Housing and the Ministry of Trade and Industry formed a political task force which in 2000 released a construction political Task Force report, “The future for construction—from tradition to innovation” (da. Byggeriets Fremtid—fra tradition til innovation) (By- og Boligministeriet and Erhvervsministeriet, 2000).

The report was very critical of the construction industry and clarified that the government was prepared to play an active role in supporting and driving the change processes.

Once again the construction industry was articulated as underperforming compared to the rest of the industry, and an increased societal economical gain of 6.5 billion kroner per year was estimated if the construction industry matched the growth of the additional industry areas. The main criticism concerned a description of the construction industry as a domestic market where the malfunctioning and inexpedient competition conditions were appointed to counteract productivity increases registered in other parts of the industry. The low productivity and the highly needed transformation of the construction industry were to be solved through more rational interactions between the actors and an unlocking of the so called “lock-in situation” of the construction industry as a description for an inexpedient dead lock of actors causing inefficient production. In this way, the Task Force report restated the already established diagnostic framing of inexpedient relations between the actors of the construction industry,

characterizing it as a lock-in situation that generated undesirable competition conditions. The Task Force report underscored that changes were required and that the government was willing to be the driving force to achieve such changes. Accordingly, The Task Force report sketched four political focus areas, which ended up influencing the work in Project House and thus also the foundation from which benchmarking should be developed as a political solution to changing the competition condition and inexpedient dead lock of actors:

- Governmental assist in unlocking the lock-in situation by providing framework conditions that provide incentives for actors to release themselves from the traditional deadlock.
- Improvement of the competences of public construction clients and public facility managers.
- Support initiatives that aim at improving the competitiveness of construction companies.
- Targeted construction research and impartial evaluation of the capabilities of the construction sector.

Twenty-eight proposals for how to address the four focus areas were provided and located in four different “packages”: a construction client package, a competition package, a collaboration package, and an innovation package.

Several propositions in the Task Force report supported a clear strategic orientation towards increased evaluation and documentations, which was considered to be attended to through benchmarking:

“There is a need for systematic external control of the development and for an impartial evaluation under and after the construction project. Such an evaluation has the objective of assessing the effects of the development activities and will furthermore produce a qualified foundation for prioritizing future experimental projects. An effective and impartial evaluation will additionally promote a more targeted and relevant dissemination of results for the interested parties. An effective evaluation must rely on a common set of rules securing:

- Measurable success criteria for experimental projects are outlined from the beginning of a building project

- Continuous follow-up on indicators
- Impartial evaluation of quality and resource consumption
- Results are documented and communicated openly to the target group” (By- og Boligministeriet and Erhvervsministeriet, 2000:153).

The Task Force report is a central historical document for this study since benchmarking was assigned in many of the political proposals. It was not the first time benchmarking was brought up as a governmental proposal, as benchmarking was already previously mentioned in the governmental construction report from 1997. But benchmarking had not previously succeeded in penetrating construction political and development activities to the extent as put forward in the Task Force report.

Benchmarking was considered to be a central element of the future knowledge system of the construction industry, which was a part of the innovation package. Benchmarking was articulated into a prognostic framing that could address four main inexpediciencies of the existing knowledge system in the construction industry, which was considered to counteract the construction industry’s competitiveness on the international market: 1) inadequate coordination of the efforts put into R&D; 2) lacking incentives for private actors to engage in R&D activities; 3) the market’s insufficiency in receiving and exploiting new knowledge; and 4) a lacking coherence between the knowledge production and the market-requested knowledge. (By- og Boligministeriet and Erhvervsfremmestyrelsen, 2000). It was simultaneously recognized that improvements of the knowledge system required a transversal incorporation of benchmarking in proposals for the three other packages. Thus the Task Force report constructed a prognostic framing of benchmarking that could address the broad range of diagnostic framings of the construction industry represented by all four packages.

Why these parallel presentations of the Task Force report and Project House?

This presentation of the course of events is relevant because the two programs ended up being highly intertwined and influenced the development and articulation of benchmarking for two reasons. Firstly, it was a clear ambition that the recommendations from the Task Force report were to be implemented in the work of Project House since the future development of the construction industry would reflect the recommendations from Project House (By- og Boligministeriet, 2000a). Accordingly, the products, including benchmarking, developed in

Project House reflected the political proposals of the Task Force report. Secondly, benchmarking was further influenced by another combination of circumstances: SBI assisted the Ministry of Housing in producing the Task Force report and influenced several aspects of the benchmarking proposition through three main suggestions: 1) establishing a framework for a benchmarking system for the Danish construction industry; 2) the establishment of an Evaluation Centre; and 3) that the centre was managed by a balanced grouping of providers, customers, and researchers.

In relation to benchmarking, the Task Force report suggested two initiatives that were considered to strengthen the knowledge system in the construction industry and simultaneously influence the work in Project House.

“The first initiative is a development of a national action plan for focusing the efforts put into construction research. The second initiative is to be discussed with the private market, and is about an establishment of an Evaluation Centre for Construction (da. Byggeriets Evaluerings Center) with the task of coordinating, evaluating and disseminating knowledge from experimental projects, and additionally in charge of gathering experiences and key performance indicators for the purpose of constructing a commonly recognized benchmarking system” (By- og Boligministeriet and Erhvervsministeriet, 2000:137).

The proposal, “A national action plan for construction research and communication” outlined a governmental ambition of focusing the efforts put into R&D towards more coordinated strategic development activities and a systematic assessment of the investments put into these activities. The proposal stated that the government would appoint a committee responsible for a national action plan for construction R&D, including a strategy for how to disseminate research to private actors. The committee would consist of representatives from the Ministry of Housing, the Ministry of Trade and Industry, and the Ministry of Environment and Energy, and it was expected that their recommendations included input from The Public Research Committee for Urban Areas and Construction (da. Det Offentlige Forskningsudvalg), The Council for Technological Service (da. Rådet for Teknologisk Service), BUR, representatives from R&D institutions, construction companies and professional associations, and finally, key foreign persons and institutions. One of the tasks for the committee was to “Strengthen international research collaboration, i.e. related to benchmarking” (Ibid.:152)

The second proposal, “Considerations of establishing an Evaluation Center” had the purposes of:

- Coordinating and evaluating experimental and urban renewal projects
- Gathering experiences and KPIs from new building projects and refurbishment projects for the purpose of constructing and establishing a recognized benchmarking system
- Disseminating knowledge from experimental projects, urban renewal projects, benchmarking, good construction practices, etc. (Ibid.:152)

With these areas of responsibility, the centre was propounded as a central actor in the future coordination, gathering, and dissemination of knowledge in the construction industry, and thus also marked out to be in a strong political position in the future development of the construction industry. The Evaluation Centre was articulated into several focus areas presented in the Task Force report, thus constituting the centre and benchmarking as focal points in the effectuation of the proposals in the Task Force report. This is particularly revealed in an overview of the tasks to be managed by the Evaluation Centre:

- Development of tool to assess the completion of public/private collaborations, cf. proposition 2.1
- The establishment of a robust frame of reference for comparing price and quality in publically funded housing projects and private housing projects, cf. proposition 3.4
- Gathering of KPIs and establishing a benchmarking system for building quality and building defects, cf. proposition 4.3
- Administrating Users Information of Construction Products (da. Byggeriets Brugerinformation), which will be in charge of comparisons of prices between similar products and additionally price and quality comparisons of comparable products, cf. proposition 5.1
- Coordinating, evaluating, and disseminating knowledge about experimental projects, applying flexible and cross-disciplinary types of organization, cf. proposition 7.2
- Benchmarking of KPIs about the building project (e.g., R&D investments, price comparisons etc.), cf. table 8.2
- Developing measuring methods and visions for construction, cf. chapter 9
- Disseminating experiences about refurbishment projects and benchmarking of urban renewal projects and services of engineering consultants, cf. chapter 10 (Ibid.:155)

The overview clearly shows how the benchmarking concept embraced a wide range of strategic orientations presented in the Task Force report, which were not aiming at one coherent overall governmental strategy for the development of the construction industry.

The Task Force report underscored the political importance of benchmarking and the Evaluation Centre in the future development activities of the construction industry. The momentum of benchmarking should be found through the public and public-supported experimental projects, through systematic project evaluation and reporting, along with a demand from clients for an electronic exchange of experiences. The broad incorporation of benchmarking in the propositions, however, resulted in widespread instrumental purposes and a lack of overall ambition for benchmarking.

As a way to attend to and manage the political importance of the centre and benchmarking, the Task Force adopted the suggestion from SBi, stating that it was a central prerequisite for the future benchmarking initiative and the Evaluation Centre that a broad range of stakeholders in cooperation engaged in the development of the initiatives. Accordingly, the Task Force report pointed out that an establishment of the Evaluation Centre was to take place in close collaboration with actors from the construction industry and to be managed by a board of directors representing companies, professional associations, and clients (By- og Boligministeriet, Erhvervsfremme Styrelsen, 2000). The centre was further suggested to include participators and existing networks in Project House.

This inclusion of multiple actors in the development of benchmarking and establishment of the centre was based on the following rationale:

“It is critical that private actors in the construction industry are interested [in the initiative] and are willing to contribute with a significant share of the financing of the centre’s activities. Half of the operation expenses are expected to be covered by private funds, membership fees from private companies, etc.” (Ibid.:153).

4.2.3 IMPLEMENTING THE TASK FORCE PROPOSITIONS IN PROJECT HOUSE

Due to the SBi assistance in producing the Task Force report, theme group 10, with Bertelsen from SBi providing ad hoc assistance, had a particular interest in the propositions for benchmarking and the Evaluation Centre, which they considered could realize the ambitions of

the group: Ensuring quality management of initiated development activities and facilitating exchange of experiences and knowledge in the Danish construction industry (By- og Boligministeriet, 2000a).

Scrutinizing the Task Force report, the theme group found that the proposed Evaluation Centre consisted of an aggregation of the requirements for documentations, assessments, evaluation, and knowledge disseminations prompted throughout the Task Force report, resulting in a blurred conception of the center's responsibilities and purposes (Ibid.).

Inspired by the Task Force report, theme group 10 contributed to a cross-functional evaluation of the work conducted in Project House, with the purpose of enabling the theme groups to follow up on and control the quality of their work. This resulted in a wide incorporation of benchmarking in the considerations and products of Project House, which will briefly be gone through in the following.

THE INCORPORATION OF BENCHMARKING IN DIFFERENT THEME GROUPS IN PROJECT HOUSE

Theme group 1, "Houses with double value for end users," presented the product "Benchmarking—towards an informative label," as a tool for measuring value. The ambition was to confront professional clients with the end users' value assessments of the building and, in this way, provide the knowledge foundation for clients to organize their activities in relation to the value expectations of the end users. Additionally, end users would be better qualified in clarifying their demands and defining value and in this way be better prepared to go into more specific and innovative solution discussions with the professional construction client (By- og Boligministeriet, 2000b).

Theme group 4, "Industrial processes," did not specifically describe how benchmarking could be incorporated in the suggested products of the group, but nevertheless, the group advocated the type of benchmarking implemented in the UK (By- og Boligministeriet, 2000c). This benchmarking initiative was considered to generate organizational improvements through construction companies' voluntary engagement in a collaborative benchmarking comparison. The initiative was launched in the late 1990s and with support from the professional associations from the construction industry and with financial support from the UK government. With this inspiration from the benchmarking initiative in the UK construction industry, theme group 4 presented benchmarking as a means to engage in collaboration with

other companies with the purposes of sharing and comparing processes with the aim of identifying problem areas and “best practices.” Such comparison was ultimately to be used to extract ideas and inspiration for how the participating companies could improve their services and products with the purpose of achieving superior performance.

Theme group 6, “Collaboration between companies and on the construction site,” viewed benchmarking as an effective tool to document and assess the effects of experimental projects. The group developed indicators where several were aiming at measuring collaboration in construction projects.

“It is necessary to identify a number of indicators, in order to trace the effects of the new collaboration models in and outside Project House. Once chosen, the indicators will be used for benchmarking for the following four purposes:

1. A tool for the client to select collaboration partners
2. Consultants and contractors can use the indicators for comparisons with other companies
3. Allies can use indicators internal between collaboration partners to measure the developments on completed project, thus compare efficiencies
4. Overall comparisons between different building projects

The indicators will enable the client to compare expenses, time consumption, quality, service, etc., across projects, in order to monitor where to receive a defined quality for the lowest price” (By- og Boligministeriet, 2000d:27).

Theme group 6 accordingly presented benchmarking in a prognostic framing that was not isolated to a voluntary engagement in benchmarking with the purpose of identifying problem areas and pursuing best practices. Benchmarking was also considered to be utilized as a technology that could qualify clients in assessments of construction companies that were bidding on a building project. Further, a more societal utilization of benchmarking was presented, as benchmarking was considered to provide a statistical foundation for comparing performances and products across different building projects.

Theme group 4, “Industrial processes,” and theme group 8, “Frame work conditions,” both suggested that indicators and benchmarking should be included as elements in a “haven” for public and private clients, in which clients could exchange knowledge and use benchmarking in improving and qualifying their specification requirements. This reflected an accommodation of the political interests in strengthening clients’ abilities to make demands to their collaborators but also formulated the instrumental purposes and objectives of benchmarking in ways that separated from the other theme groups’ conceptions of benchmarking.

“In Project House KPIs must be gathered from different types of buildings from which comparisons can be conducted. Retrospective inquiries of salaries, materials and costs of completed building process are to provide the basis for comparisons. The benchmarking will subsequently be used in the haven for clients to qualify their demands” (By- og Boligministeriet, 2000e:9).

“The client will accordingly be provided a basis to an assessment of future projects in relation to a number of benchmarking measures from similar projects, thus securing the basis for the client construct a specification of demands providing a product of highest quality to the lowest cost [...] The building process will be monitored by a continuous production of indicators and KPIs which will be presented to the client by external consultants. In this way clients will be able to secure the quality during the building process” (By- og Boligministeriet, 2000e:33).

The four theme groups suggested very different applications of benchmarking, which were very different in both instrumental purposes and objectives. The preliminary construction of benchmarking in Project House accordingly embraced many different focus areas to be addressed, and three rather fundamentally different prognostic framings of benchmarking coexisted in this early stage.

BENCHMARKING AS A SOCIALLY CONSTRUCTIVE TECHNOLOGY

Firstly, benchmarking was perceived as a means to gain insight into performance areas of the construction industry that had previously been inaccessible. This purpose reflected ambitions, also present in the Task Force report, of utilizing benchmarking as a mean to gather information of the construction industry at an overall level, from which knowledge could be extracted. In this way benchmarking was envisioned to play a central role in creating

transparency of the prices, products, services, and quality performances of the construction industry, and hereby providing better possibilities for clients to qualify their demands to the construction companies. This ambition of transparency must be perceived to be of societal interest since a fulfillment of such purpose would accommodate the governmental ambitions of positioning the clients as central actors to drive the construction industry towards increased productivity and better quality performance through their demands. In the following, this prognostic framing of benchmarking will be referred to as a “socially constructive technology” since benchmarking in this framing provides a basis to fulfill purposes that are of societal interest.

BENCHMARKING AS NORMALIZING GOVERNING TECHNOLOGY

Secondly, benchmarking was perceived as a tool for clients to use to select the best companies based on their performance and in this way use benchmarking to monitor where to receive the best correlation between price and quality.

The effect of benchmarking thus became based on the regulative power of clients produced by transparency combined with economical threats or sanctions consisting of deselections caused by insufficient performance capabilities. An appertaining expectation was that companies eventually would conform to the “marked standards” produced through benchmarking since the consequences of ignoring it were severe:

“[C]lients will deselect the worst performing companies, which will be forced to change or leave the market” (By- og Boligministeriet and Erhvervsfremmestyrelsen, 2000:153).

This purpose reflected an—at the time—increasingly prevailing conceptualization of benchmarking in the public sector. E.g., the Ministry of Finance released a report on benchmarking in 2000 that clearly reflected a high governmental interest in benchmarking (Finansministeriet, 2000). The report provided methods, tools, and experiences with benchmarking within the context of the public sector. The inspiration of implementing benchmarking in the public sector came from the dissemination of the technology in the private sector. However, the implementation of benchmarking in the public sector entailed a reformulation of benchmarking on several central areas. By regarding benchmarking as a judgment tool for clients, the expectations were that benchmarking would cause the private market to conform to the performance criteria outlined through benchmarking. Triantafyllou

(2007) describes this frame of benchmarking as a “normalizing governing technology” as benchmarking produces “a standard” through comparisons, which actors use as basis for organizing their actions and decisions. In this way, benchmarking has highly regulative implications when considered as a tool for the clients to create incentives through sanctions in the construction industry, as benchmarking indicators become synonymous with the ambitions of success set up by the clients, thus activating private construction companies¹ to seek equivalent ambitions.

Thus benchmarking facilitates “the self-governing capacities of individuals and/or organizations through the production of normalizing knowledge on the activity targeted by governing” (Triantafillou, 2007:836) and turns individuals and organizations into “acting subjects with a responsibility for the governing of a particular field or set of activities” (Triantafillou, 2007: 836).

Benchmarking as normalizing governing technology relies on the constraining and regularizing of actors’ behavior by establishing standards as an attempt to influence future actions, driven by the sanctions related to actors’ capability to conform to appertaining performance expectations. The sanctions consist of an advantage for private companies when complying with performance expectations determined by clients and simultaneously a disadvantage in case of underperformance. Thus benchmarking is to be considered as a means to make the private companies behave instrumentally and expediently when conforming to explicit performance expectations provided through clients’ normalizing comparison of their performances.

BENCHMARKING AS REFLECTIVE DEVELOPMENT TECHNOLOGY

Thirdly, exemplified by the interests in the UK benchmarking program, benchmarking was perceived as a way to identify “best practices” and learn how to improve services and products through benchmarking activities. Through an identification and illustration of “best practices,” development-oriented companies will be provided an opportunity to and increased interest in improving products and service. Eventually other companies will be motivated to follow in order to be competitive. This prognostic framing of benchmarking is built on trust, collaboration, and a mutual benefit to participants over a period of time and aims at gaining

¹ The term “private construction companies” embraces the full range of private companies within the construction industry; contractors, consulting engineers, and architects.

competitive advantage by means of continuous improvement of processes learned from the successful practices of others (Watson, 1993; Camp, 1995). This prognostic framing was the original type of benchmarking introduced in the 1990s and relies on companies' self-imposed motivation to adjust their products and services.

This prognostic framing theoretically rejects the application of benchmarking in judgments or sanctions since benchmarking is considered a technology highly reliant on willingness to share knowledge.

“Benchmarking is used to improve performance by understanding the methods and practices required to achieve world-class performance levels. Benchmarking's primary objective is to understand those practices that will provide a competitive advantage; target setting is secondary” (Camp, 1995:15).

Benchmarking is thus to be considered as a “reflective development technology” that focuses on process improvements rather than the end product (Bowerman et al., 2002)—in this case, quality of service and products. In this view, benchmarking is not to be regarded as a prescriptive request to conformity but as voluntary reflective re-organization of processes that stipulate that companies actively and with self-interests engage in changing their products and services towards superior performance.

“Best practice benchmarking is not simply competitor analysis, espionage or theft from rival companies. It aims not simply to measuring the organization against the best in class and adopting their methods but on understandings of how to achieve superior performance by improving methods, practices and processes learnt from others (Watson, 1993; Zairi, 1997; Beatham et al., 2004; Moriarty and Smallman, 2009).” (Rasmussen, 2010)

Benchmarking accordingly presents an external framework consisting of alternative methods, processes, and practices from which participators are provided a foundation to reformulate their subjective interpretation of expedient products and services and, in this way, destabilize or dismiss other previously taken-for-granted perceptions that may have counteracted performance ambitions. Ultimately, actors in the private market will independently generate changes as their reflective interpretation of “best practices” incites them to pursue performance improvement and, accordingly, competitiveness and increase of economical profit.

	Prognostic framing		
	Benchmarking as socially constructive technology	Benchmarking as normalizing governing technology	Benchmarking as reflective development technology
Response to diagnostic framing	<i>Lacking transparency and knowledge of the performance of the construction industry</i>	<i>Inexpedient competition on price; clients are not utilizing their influences in developing the construction industry</i>	<i>Companies are not sufficiently motivated initiating changes of the product and services</i>
Institutional pillar	<i>Normative</i>	<i>Regulative</i>	<i>Cultural-cognitive</i>
Utilization	<i>Judgment and decision-oriented</i>	<i>Judgment-oriented</i>	<i>Improvement-oriented</i>
Expected benefits	<i>Provides basis for political decisions, explicit success criteria, target setting and overall performance development</i>	<i>Provides basis for selection of companies, regulates, controls, monitors</i>	<i>Provides learning of best practices, mutual benefits to participants, continuous improvement of processes</i>

Table 4: Overview of the three prognostic framings of benchmarking

These three prognostic framings of benchmarking can be perceived as early attempts to formulate benchmarking in ways that addressed a wide range of the diagnostic framings of the construction industry identified during the 1990s. But this coexistence of rather obviously different prognostic framings did not cause any concerns at this time and demonstrates how benchmarking was conceived as a relatively unproblematic technology capable of working across the diagnostic framings and integrating diverse documentation, evaluation, and assessment requests of the theme groups in Project House and the political focus areas of the Task Force report.

In an interview with Niels Haldor Bertelsen, SBI, reasons to this coexistence of prognostic framings of benchmarking in Project House were described.

The main focus of theme group 10 at this state of Project House was to get the technicalities of benchmarking clarified. Thus neither the specific content of a benchmarking system nor the instrumental purposes of benchmarking were clear or to be determined at this early state. Benchmarking was still at a state of development where implications or limitations were not yet relevant (Interview, Niels Haldor Bertelsen).

Further, Bertelsen explained that benchmarking was only to be considered as indirect contributors to achieving the ambition of “double value for half the price,” as the benchmarking

was not to be considered autonomous but as a supporter and documentation of the development activities of Project House (Interview, Niels Haldor Bertelsen).

As a result of these relatively loose premises for developing benchmarking, the Task Force report and Project House presented benchmarking as a multifaceted technology embracing the overall requirements for assessments, evaluations, documentations and knowledge disseminations, and accordingly resulting in ambiguous interpretations of the benchmarking concept. The initial prognostic framings of benchmarking left an ambiguity of interpretations of partly the objectives of benchmarking and the interrelation between benchmarking and its overall societal influence and partly about the future strategies of how to develop, communicate, and operationalize benchmarking.

4.3 THE ESTABLISHMENT OF THE EVALUATION CENTRE

The previous chapter uncovered the introduction of benchmarking in the late 1990s and the political ambitions for the Evaluation Centre. Benchmarking appeared as a solution to the wide range of diagnostic framings of the construction industry, and the Evaluation Centre were considered to be of great importance in the future construction political activities.

The Evaluation Centre however gave rise to political struggles between different actors with strategic interests in attaining ownership of the centre and, accordingly, its benchmarking activities. During 2001 alliances emerged between private actors as these organized their activities in negotiations and consolidations of interests in the centre and benchmarking. Several private actors expressed political interests in the establishment of an Evaluation Centre and development of benchmarking. Private resources were accordingly invested in forming the Evaluation Centre and the configuring of benchmarking. The introduction of benchmarking in the late 1990s had produced a political arena from which diverse strategic political interests in benchmarking emerged among private actors.

This chapter demonstrates who and which interests and political considerations laid the foundation for establishing the Evaluation Centre, through which benchmarking was to be developed and find legitimacy as a development initiative. It will be illuminated how the established Evaluation Centre adopted multiple suggestions from the Task Force report and Project House, thus once again articulating the centre as a carrier of inconsistencies and contradictory purposes for and perceptions of benchmarking.

The chapter will further illuminate how ministerial changes due to a political shift from left to right in 2001 caused pivotal changes in the configuration of the construction policy throughout the 1990s and beginning of the 2000s. In this way, the premises from which the development of benchmarking took place will be uncovered in the following.

4.3.1 THE EVALUATION CENTRE AS POLITICAL AREA OF INTEREST

The first political struggle that could potentially influence and reconfigure the preliminary, but yet unclear, prognostic framings of benchmarking was not directly related to benchmarking but instead related to the establishment of the suggested Evaluation Centre. A number of political announcements in 2000 and 2001 reflected an emerging political interest in measuring the performance of the construction industry in order to steer the competitive parameters from price to quality (Interview, Niels Haldor Bertelsen). This indicated that, despite the unclarity of the area of responsibility of the centre and the lack of coherence of its affiliated activities, the proposal was still considered sufficiently attractive for different actors to engage in. The Task Force report and Project House accordingly had succeeded in introducing the Evaluation Centre as an important initiative for the future development activities of the construction industry. Despite—or maybe because of—the rather diverse and loose formulation of benchmarking, it was evident that the Evaluation Centre was to be an influential actor in the future construction political development and to be a central place from which the future benchmarking activities were to be defined and depart from.

The prospect of establishing the Evaluation Centre was highly plausible, as the Minister of Housing, in a press release, had the following reflections about the Task Force report under the headline “We must have the Evaluation Centre for Construction”:

“The Task Force proposal of establishing an Evaluation Centre is probably the proposal that has gained the most support from the professional associations in the construction industry. I also find this centre to be a central element in the development of the construction industry. First of all it is crucial that the experimental building projects that are initiated in Project House are evaluated through overall and consistent instructions. This is considered to be one of the centre’s tasks.

But furthermore benchmarking has become a buzzword in construction, and we must secure a central gathering of experiences and KPIs. Only in this way can we achieve a higher degree of transparency, which I consider essential in order to increase competition in the construction industry” (Lotte Bundsgaard, Byggeri.dk, 2001).

With this statement, Bundsgaard expressed two central political considerations: firstly, that the Evaluation Centre was to be assigned a great responsibility and a to be considered a central

element in attaining success of the future construction political development activities. Secondly, the minister articulated benchmarking into a clear prognostic framing that addressed the inexpedient competition in the construction industry by generating transparency of the performances in the experimental building projects of Project House.

In February 2001 SBi was presented as an obvious candidate for managing the activities of the Evaluation Centre due to its many years of research and engagement in developing evaluation models and documentations requirements for the construction industry. The new director of SBi, Lone Møller Sørensen, had a background in two large, private Danish companies, Velux and Rockwool, and was aware of the lack of knowledge distribution of research to private companies in the construction industry (Berlingske Tidende, 2001). In a press release, Sørensen explicitly showed an interest in the Evaluation Centre and included it in her recommendations for a better coordination of the dissemination of research to the construction industry.

“I believe that the challenge is to organize better interplay between the existing knowledge institutions, rather than establishing new ones as some people have suggested [...] SBi should take on the responsibility of acting as promoter of this process. E.g., the construction political report suggested an establishment of an Evaluation Centre. This centre could profitably be located at an independent sector research institution such as SBi” (Lone Møller, Berlingske Tidende, 2001).

In this way, the Evaluation Centre became articulated into a strategic ambition of coordinating the production, dissemination, and integration of knowledge, which simultaneously reflected the political influence the centre was envisioned to have. By declaring interests in the ownership of the centre, SBi was highly contributing to an increasing awareness of the prospective realization of the initiative.

4.3.2 PRIVATE ACTORS ENGAGE IN ESTABLISHING “BYGGERIETS EVALUERINGSS CENTER”

A reaction to the prospect of locating the Evaluation Centre at SBi emerged as three private actors announced that they had joined forces and initiated the establishment of a Byggeriet

Evalueringens Center, BEC (en. Evaluation Centre for Construction²). The three actors were Danske Entreprenører (en. the Association of Danish Constructors), F.R.I. (en. the Association for of Consulting Engineers), and RealDanmark Fonden (later and in the following, “Realdania”)³. The foundation was a new and financially very powerful actor in the construction industry with assets of 20 billion kroner. The strategic objective of the foundation was (and is still today) to develop and support the built environment. The major part of the financing came from Realdania, who engaged in the initiative by funding 6 million kroner to the establishment of the centre. This was, at the time, the largest amount funded by Realdania. The managing director of Realdania, Flemming Borreskov, expressed the foundation’s motivation for financing BEC, which simultaneously expressed Realdania’s political interests in both benchmarking and the construction industry as a whole:

“We are financing the establishment, and the new scenario is that the centre is going to be managed and financed jointly by private parties from the construction industry and the state. The centre is going to be a gathering place for all actors in the construction industry, where the public and private business communities can exchange viewpoints. Some of the work in the centre is conducted in network groups, and BEC is going to lead the development of the construction industry. We [Realdania] wish to generate development and changes by means of flagship projects, meaning that such prominent projects will set for courses that reveal different and new directions” (Flemming Borreskov, *Berlingske Tidende* (2001d).

But which motivational framing consolidated these private actors to engage in this initiative? And as important: Which prognostic framings could the alliance be a reaction to?

Officially, the initiators articulated the establishment of BEC as the construction industry’s reaction to the productivity and quality criticism during the past eight years. But interviews with several actors (Curt Liliegreen, Christian Lerche, Michael H. Nielsen, Jørgen Nue Møller) revealed an additional incentive for private actors to engage in the establishment of BEC.

“Not everyone in the construction industry was interested in the centre. But if it was to be established then we would like to have a say in the development. As I remember it,

² Byggeriets Evalueringens Center has chosen “The Benchmark Centre for the Danish Construction Sector” as the English translation.

³ Danish names are used prospectively in the analysis.

this was a discussion that Danske Entreprenører and particularly F.R.I. had at the time. The discussion spread and more associations were invited to join the initiative by the original initiators who announced at a press conference at Gammel Dok that the construction industry had decided to engage in the establishment of the centre” (Interview Curt Liliegreen).

The Task Force report, Project House, and SBi’s interest in the centre had apparently given rise to political discussions about whether private actors ought to engage in the centre and influence the development. Asked about the potential risks of a ministerial establishment of BEC, Liliegreen responded:

“The risk would be that it would be enforced in the private market as a public control measure more than it would be a knowledge centre to which actors from the construction industry could feel a sense of ownership and engage in it. You could risk that it would be more monitoring than development.” (Interview, Curt Liliegreen).

This concern was paradoxically also stated in an interview with Niels Haldor Bertelsen from SBi:

“Very early we decided that the philosophy of benchmarking was: rather one controllable parameter than 50 theoretical developed parameters. [...] It is better to have one parameter and manage that well than it is to have many and only manage the theory. The idea was that benchmarking should provide development. We do not use benchmarking to exercise control but to manage the development activities” (Interview, Niels Haldor Bertelsen).

The rising fear among the private actors of being subjected to a ministerially developed control system is likely to have its roots in the political announcements pointing in the direction of changing the competition through measurements of other competitive parameters than price and in this way using benchmarking to steer the competition from price to quality.

This concern was also stated by Liliegreen in a press release:

“After the hard criticism from the government the Danish construction industry could have resigned and let the political system take action. This would be tantamount to a

typical social democratic model with authorization of certain contracting companies, control and regulation systems” (Curt Liliegreen, *Erhvervsbladet*, 2002).

Through my interviews with actors involved in BEC, it was clear that the development of a benchmarking system was one of the primary drivers of the private actors to get involved in the centre. According to the interviewees, it was evident that the Agency for Trade and Industry was intent on establishing a benchmarking system and disseminating the system by regulatory means through executive orders for state construction projects (Interview, Curt Liliegreen, Michael H. Nielsen, Jørgen Nue Møller, Christian Lerche, and Jesper Rasmussen). A motive for professional associations to establish the centre on private hands was to be found in the opportunity to attain influence on the design of the benchmarking system in a manner that would accommodate the needs on the market and suit the members of the professional associations in the construction industry (Interview, Gunde Odgaard, Curt Liliegreen).

The motivational framing that was supported by the private actors can accordingly be summarized to 1) assessment of the appertaining consequences of having a ministerially controlled centre and developed benchmarking system; 2) strategic interests in influencing the establishment of the centre and benchmarking system; and 3) show a private initiative that reflected an accomodation to the critique from the Task Force report by showing responsibility and engagement in the future development agenda.

The formulation of diagnostic framings of the construction industry that the centre was to address through its activities and the corresponding prognostic framings of benchmarking were still to be constructed.

The initial formulation of these framings was attempted in a serie of press releases (Ritzaus Bureau, 2001; *Berlingske Tidende*, 2001a; *Berlingske Tidende*, 2001b; B.T., 2001; *Berlingske Tidende*, 2001c; *Erhvervsbladet*, 2001), showing that the initial considerations of the responsibilities of BEC had similarities to the responsibilities of the Evaluation Centre suggested in the Task Force report and also that BEC was to function as a focal point in the development of the construction industry.

“The centre must in an independently and trustworthy manner attend to the following responsibilities:

- Coordinating, evaluating and disseminating knowledge about experimental projects
- Develop and operate a benchmarking system consisting of KPIs for the construction process and the end product
- Develop methods of measurements and objectives for the construction industry to pursue
- Function as a gathering place for theme groups from Project House” (Erhvervsbladet, 2001)

This was a multifarious ambition to be handled by BEC and yet there was a strategy to be determined to address these responsibilities. The three first responsibilities highly reflected the diagnostic framings that benchmarking was to address. The specific activities of BEC should be determined by a board of directors that broadly represented the entire construction industry. The first constellation of board members consisted of representatives from the Ministry of Housing, BAT-kartellet (an association attending to employee interests in construction), Byggematerialeindustrien (a trade association for producers, suppliers, distributors, and contractors in the construction industry), Byggeriets Arbejdsgivere (an employer’s association in construction), Danske Entreprenører, Bygherreforeningen (an association for professional clients), Ministry of Trade and Industry, F.R.I., Realdania, P.A.R. (later Danske Ark, The Danish Association of Architectural Firms) (BEC, 2002a).

Of specific interest to this study, a prognostic framing of benchmarking was revealed, as a clear focus area was to develop a benchmarking system that could facilitate comparisons of quality and prices in relation to different construction processes and types of collaboration. By documenting and analyzing the performance of construction projects by means of benchmarking, BEC was to improve quality and increase productivity in the construction industry. The Ministry of Housing committed financially to the initiative by defraying the expenses for the facilities of the centre (BEC, 2002a).

4.3.3 BEC AS POLITICAL ARENA

The objectives clearly indicate that the board of directors had serious ambitions ascribed to BEC and positioned the centre as a central place for future development activities related to

benchmarking, evaluation, and documentation. Accordingly, BEC was quickly considered as a political asset, and board members of BEC were provided political power to influence and shape the activities of the centre by advancing interests in their preferences. The powerful role of the BEC and attractiveness of being included in the board of directors was demonstrated two weeks after the announcement of the establishment. The first official criticism of the initiative came from the professional associations, Håndværksrådet (en. The Danish Federation of Small and Medium-Sized Enterprises) and Dansk VVS (now “Tekniq,” a Danish association for installation companies), which were not included in the board of directors (Erhvervsbladet, 2001a) and thus not included as parts of the “new focal point” of the construction industry.

“It seems like the big contractors lead the field and get a centre reflecting their requests. There is a risk that the good intentions from the Task Force report will not be realized, and that the collaboration, which is critical in order to improve the construction industry, will not be unfolded in the new centre, since the big contractors favor their own interests” (Lars Jørgen Nielsen, Erhvervsbladet, 2001a)

The managing director of Dansk VVS, Flemming Preisler, was unsatisfied with the missing representation of the mechanical and electrical contractors.

“I and many of my members wonder why we are not invited to participate in BEC. The initiators of BEC have a one-sided focus on building envelope. The technical is a very important part of a new building” (Flemming Preisler, Erhvervsbladet, 2001a).

A view shared with the El-installatørernes Landsforening (en. National Association for Electrical Contractors), who criticized the composition of the board of directors to reflect a low priority of the technical aspects of buildings.

A senior economist from Danske Entreprenører, Curt Liliegreen, rejected the critique:

“We have representatives from the employers and from the employees. We have representatives from the producers and from the consumers, also the regulators and knowledge centers are represented. There are many associations in the construction industry and we cannot include all” (Curt Liliegreen, Erhvervsbladet, 2001a).

These reactions are included to demonstrate the political influence that BEC was considered to have. It also reflected a maybe even more controversial topic: Who represented the construction

industry in the political debates? This new ambition of constructing communities of public and private actors that in mutual agreement could discuss and decide the construction political development of the construction industry simultaneously reflected whose interests were to be taken into account.

The critique from the professional associations prompted the board members of BEC to respond. In March 2003 a seat was open at the board, caused by a merging between the two trade organizations, Danske Entreprenører and BYG, since both associations were board members in BEC prior to the merging. Accordingly, Tekniq, which was the new trade association after a merging between Dansk VVS and El-installatørernes Landsforening, was included in the board of directors.

4.3.4 APPOINTING THE MANAGING DIRECTOR

One important issue was still to be attended to: Who was to hold the chief executive position of the centre? This decision should show to be of high importance, as the managing director ended up having great influence on the future development of a benchmarking system as well as the prognostic framings of benchmarking.

Half a year after the announcement of establishing BEC as a private initiative, the board members appointed Curt Liliegreen managing director of the centre. Through his more than 20 years in Danske Entreprenører, Liliegreen had been heavily involved in the political discussions of the framework conditions of the construction industry.

Soon after his nomination, Liliegreen sketched the background and the visions for the centre in a press release, in which Liliegreen revealed ambitious expectations. The press release made it clear that BEC was going to be an effectuation of the Evaluation Centre suggested in the Task Force report and Project House and in this way cemented that the centre was to be a powerful actor in the future construction political development agenda. However, it was also made clear that the tasks of BEC were going to be established in a balancing between public and private interests.

“It is not a coincidence that there are similarities between the responsibilities of the centre and the topics in Project House and the Task Force report. BEC is a logical result of the discussions in the construction sector in the recent years.

In the Task Force report an establishment of an Evaluation Centre was suggested, but with different tasks of the centre, that is now realized. The Task Force report did not consider that the centre was to be a private initiative, but F.R.I. and Danske Entreprenører felt that it was important that the construction industry accepted responsibilities for this task. This was important for the credibility of the industry, but was also important for the credibility of the centre” (BEC, 2002b).

Liliegreen pointed out that BEC was an example of actors in the construction industry going together despite their diverse interest with the main objective of initiating change that would benefit the industry as a whole.

“The establishment of the centre expresses that it was necessary to gather the different actors from the construction industry in this mutual initiative in order to close the gap between the traditional contradicting interests in the construction industry and secure joint collaboration in the future” (BEC, 2002b).

The large contribution of Realdania was emphasized as an opportunity for the construction industry to take matters in their own hands since BEC was not heavily reliant on financial support from the state (BEC, 2002b). This clearly demonstrated how Realdania was considered to be of high importance to the centre and also facilitator for the joint responsibility between private and public actors in construction development initiatives due to their financial capacity to invest in such initiatives. This financial support of Realdania was considered to be of high importance to facilitate the establishment of BEC since this enabled private actors to attain influence on the political activities of the centre and BEC not to be imbalanced in favor of specific political ambitions (BEC, 2002b).

The politically independent role of BEC and the balancing between the board members’ sometimes diverse political interests gave rise to potential political struggles when determining BEC’s areas of responsibilities and benchmarking activities. A report from October 2002 presented some reflections of these potential difficulties in handling the many interests in the board. It was emphasized that BEC was reliant on a common recognition of the centre as a legitimate development place for a future benchmarking system and its function as knowledge centre. The following two quotations reveal a high awareness of the potential political struggles that could be rendered by implementing a benchmarking system in the construction industry:

“BEC is established by representatives from the entire construction industry and is meant to benefit them all. The centre must be independent of private interests, these being company groups, professional associations, companies or the state. Because of this all actors must accept that the work of the centre does not necessarily reflect private interests. This is the price for securing solidarity and the integrity of the centre” (BEC, 2002:19).

And further,

“The centre will not yield in case of a conflict between the quality of data and political or other interests of parties in the construction industry. By supporting this philosophy the board of directors send out the political statement that the centre must have a reliable professional content and not to function as a ‘laundering’ of the construction industry on an incorrect foundation” (BEC, 2002:19).

The establishment of BEC as a private initiative revealed how private actors and the managing director attempted to legitimize the centre as an ambiguous proposal that accommodated the request in the Task Force report and Project House. It was clear that the initiators recognized that, in order for BEC to be a legitimate alternative to a governmental initiative, it was a prerequisite that the ambitions of the centre were high and were accepted by the authorities.

The successful establishment of BEC was additionally a concrete example of a widespread governmental acceptance of the influential power that private actors were provided in forming the future construction policy in a close collaboration between the authorities and private actors.

4.3.5 THE CLOSURE OF MINISTRY OF HOUSING

In November a central shift in the configuration of the governmental construction policy took place, which influenced the conditions from which the policy was made and also changed the institutional environment from which the development activities had previously been derived. The change further legitimized BEC and the inclusion of private actors in developing the construction industry.

As a result of a political shift from left to right in November 2001, the Ministry of Housing was abolished as part of a larger reorganization of the ministries. The political responsibilities of public and publicly-funded construction projects were placed in an agency named Danish Enterprise and Housing Authority (da. Erhvervs- og Boligstyrelsen – later Erhvervs- og Byggestyrelsen, EBST) under the Ministry of Trade and Industry. This ministerial reorganization had a great impact on the construction policy, traditionally known from the Ministry of Housing as EBST, and was a merge between the Agency for Trade and Industry and the Ministry of Housing. The closure of the Ministry of Housing entailed that the construction policy was to be formulated primarily by the far more market- and competition-oriented Agency for Trade and Industry that already in the 1990s had revealed an interest in the industrialization and productivity development of the industry as a whole.

This entailed that the construction industry was not to the same extent as during the time of the Ministry of Housing to be perceived as an independent industry that was separated from the rest of the industry.

Anders Kretzschmar became the director of the new EBST. Kretzschmar had previously been called in to support the Ministry of Housing in the larger socio-economic issues and analysis and governmental projects addressing the productivity and quality of the construction industry. In this connection, Kretzschmar was not, surprisingly, highly involved in the production of the Task Force report and in pointing out the low productivity and inexpediences of a domestic market production.

The productivity issue was yet again given much governmental attention in the release of the report, “The Will for Growth” (da. Vækst med Vilje), where the possibilities for productivity gains in the construction industry were considered to be of great significance (Regeringen, 2002). The report restated the ambition of utilizing the considerable construction activity of the public sector to initiate change in the construction industry. The clients were yet again determined to be driving this change by acting as demanding consumers:

“By making demands about new types of organizations and product development the public sector can in its position as client facilitate the productivity development in the construction industry” (Regeringen, 2002:62).

This statement illuminates a continuation of the governmental ambition of positioning clients as change agents and driving forces in generating changes in the construction industry by making demands to the companies. Opposed to previous statements, these political ambitions were, however, not isolated to be initiated in experimental building projects in construction political development programs as Project House but in the public and publically-funded building activities as a whole.

THE ABOLITION OF BUR AND PROJECT HOUSE

An ambition in the new government platform, “Growth, welfare and change” was to reprioritize the state resources by, among other things, minimizing the numbers of state-funded councils. In this connection, the government abolished BUR with the argument that, in a prioritization of governmental resources, BUR’s functions could be performed by SBi, Forum for construction policy, and BEC⁴.

Further, the government abolished the state funding to research concerning social housing and experimental projects⁵. A discontinuance of Project House was a consequence of these cost cuts, and accordingly, a cancellation of the high ambition of conducting experimental projects and testing the products of the theme groups under the auspices of Project House.

DELEGATION OF THE CONFIGURATION OF CONSTRUCTION POLITICAL ISSUES TO PRIVATE ACTORS

In line with earlier construction political announcements, the Minister of Trade and Industry, Bent Bendtsen, advocated for a joint responsibility between the private actors in the construction industry and the government in improving the competitiveness in an international market. Reciting productivity results from the Task Force report, Bendtsen enhanced the societal importance of improving quality and productivity by engaging the actors in construction in a mutual interest in the future development agenda.

The development of the construction industry was thus, to a higher extent than previously, placed in the hands of the private actors of the construction industry (see also Kristiansen et al., 2006).

⁴ <http://www.byggecentrum.dk/nc/bygnet-nyhederne/nyhed/browse/2/article/nu-er-det-officielt-bur-nedlaegges/> accessed 03-06-2012

⁵ <https://www.retsinformation.dk/Forms/R0710.aspx?id=91358&exp=1> accessed 03-06-2012

“It is of the government’s opinion that there is no longer need for a independent council for this area [Bygge/bolig], i.e., because of the many proposals to advance the development of the construction industry, which are produced in a close collaboration with the professional associations in Project House. Future counselling can be fulfilled by comparable agencies like SBi, BEC, and Byggepolitisk Forum.”⁶

Bendsten emphasized BEC as a positive example of a responsible action from the construction industry:

“Luckily we have already seen the first initiative from the private parties. BEC will open in a few weeks. The centre will become the construction industry’s own quality control primarily financed by the private parties. This is a good and positive step on the road to collaboration and increased efficiency” (Bent Bendtsen, Dansk VVS, 2002).

BEC rapidly responded to this assignment of responsibility:

“This forum [BEC] has become twice as important after the closure of the Ministry of Housing and BUR, because we truly need dialog in the building sector. [...] The thoughts are that the centre is to continue the network in Project House, by reviving some of the theme groups. In this way it is possible to bring together a number of resource persons from the construction industry that during Project House proved to be valuable” (BEC, 2002c).

This was an opportunity for BEC to occupy a central political position in the construction industry that had now been weakened as Project House and BUR no longer existed. BEC accordingly exploited the deinstitutionalization of the existing construction political environment, and through this legitimized the centre’s political position in future construction political development processes.

The political importance of BEC in the construction industry was underscored at the formal presentation of BEC at the first annual meeting in October 2002. The political interest in the centre was revealed as 166 persons—representing architects, consulting engineers, contractors, clients, research centres, and government officers attended the meeting. At the meeting, BEC

⁶ <https://www.retsinformation.dk/Forms/R0710.aspx?id=91358&exp=1> accessed 03-06-2012

presented a provisional disposition to a benchmarking system. The aim was to develop a operational benchmarking system within one year (BEC, 2002d).

4.4 CONCRETIZING THE PROGNOSTIC FRAMING OF BENCHMARKING

The last chapter revealed how different actors had political motives for engaging in the establishment of BEC, and also the changes that occurred in the construction political climate during the early 2000s.

This chapter demonstrates how benchmarking was concretized into a benchmarking system and articulated to address several diagnostic framings of the construction industry.

It will be argued that the incoherent prognostic framings of benchmarking and the inclusion of the many different actors which have diverse interests in the benchmarking initiative constituted BEC as a political arena where many local perspectives and strategic interests had to be managed. These conditions for developing and concretizing benchmarking resulted in challenges aimed at constructing a mutually accepted prognostic framing of benchmarking. Accordingly, the broad motivational framing that could meet the many interests represented in the board of BEC resulted in a benchmarking system that relied on heterogeneous prognostic framings of benchmarking.

The development of benchmarking and articulation of prognostic framings became further influenced by two new factors: 1) the political influence of the managing director Curt Liliegreen and his interests and ambitions for BEC and benchmarking, and 2) political interests in the benchmarking initiative propounded by the new government, which ended up affecting the prognostic framing of benchmarking as well as the development of the benchmarking system.

4.4.1 ESTABLISHING THE BENCHMARKING SYSTEM

Concurrent with the formal establishment of BEC, as discussed in the previous chapter, the initial work of developing the benchmarking system took place. The new managing director, Liliegreen, became a central actor in this development:

“I was actually given free reins to develop this system, which I presented to the board of directors in February 2002. It was called “Ideas and action” and was part of the strategic plan for the centre. [...] In this document was a description of the benchmarking system. You can call it a rough sketch. It got an undisputed positive welcome of the board” (Interview, Liliegreen).

Liliegreen’s inspiration to the benchmarking system came from his work in Project House. In one of the summaries of the initial work in Project House (By- og Boligministeriet, 2001a), Liliegreen introduced his recommendations for a benchmarking system under the title “Transparency through evaluation,” based on the challenging task of assessing the development activities of Project House.

“How can we verify that the objectives of a construction project are achieved? How do we secure that the participating actors in the project gain insight into the reaped experiences? [Answer:] By means of statistics! More precisely: a system consisting of key performance indicators which allows comparisons between the different building projects—also called a benchmarking system” (By- og Boligministeriet, 2001a:13).

Liliegreen was inspired by the UK program, “Movement for Innovation,” and pointed to the seven main operational KPIs and 38 underlying indicators as suggestions for a future benchmarking system. The seven KPIs were:

- Time (7 indicators)
- Costs (8 indicators)
- Quality (3 indicators)
- Client satisfaction (3 indicators)
- Changes requested by the client (2 indicators)
- Profit performance (11 indicators)
- Safety (4 indicators) (By- og Boligministeriet, 2001a).

Liliegreen, however, pointed to some differences between the UK system and the system that he was intent on developing:

“It is implicitly presupposed that the system will compare construction projects. [...] This is similar to the system in UK [...] There is, however, one central difference between the system that is presented here and the English model. Movement for Innovation only benchmarks experimental projects. The Danish model facilitates benchmarking of all kinds of projects (BEC, 2002:11).

In October 2002 BEC released a report called “The Benchmarking System for Construction” (da. Byggeriets Nøgletalssystem), that outlined the preliminary thoughts about BEC’s position in the construction industry and the areas that were to be addressed through the benchmarking system. This report was specifically interesting, as it propounded the foundation from which the benchmarking system was developed and also reflected the political position that the centre was considered to possess—two factors that had great influence in the future.

“BEC will be a change agent in the construction sector. Through analyses, statistics and collaborations with actors from the sector, the centre will enhance a culture where benchmarking is used by the actors in the construction industry to base their demands to building products and professional building processes. Evaluation will secure transparency of the building product and hereby lead to healthy competition. [Benchmarking] will provide analytical foundation for studies of the productivity of the sector and contribute to solutions to the problems of the sector (Ibid.:19)

Besides illuminating the influential position that BEC was considered to have, the report further revealed the first unambiguous diagnostic framing of the construction industry as having inexpedient competition conditions. This diagnosis accordingly entailed a prognostic framing of benchmarking as a technology that could provide a new “culture for statistics.” Further, Liliegreen revealed another instrumental purpose for benchmarking, which was of sectorial interest: The utilization of benchmarking to provide insight into the productivity development of the construction industry as a whole. The latter prognostic framing was in this way linked to the perception of benchmarking as a socially constructive technology, from which political solutions to the productivity issue of the construction industry could be qualified. The different

objectives of benchmarking suggested in the report accordingly led to multifarious instrumental purposes:

- Benchmarking helps companies to identify weaknesses
- Benchmarking generates best practices of the construction industry
- Benchmarking creates transparency
- Benchmarking generates knowledge about the performance development of the construction industry

One thing was clear in Liliengreen's preliminary proposal: The first version of the system was to be designed for measuring contractors. The long-term ambition was to include all actors in the construction industry in the benchmarking system: clients, consulting engineers, architects, and contractors. But the initial work was on developing a benchmarking system for contractors, and the KPIs that were considered to be most important for the development of the construction industry were:

- Productivity
- Profit performance
- Compliance with time schedule
- Compliance with budgets
- Building failures and defects
- User value
- The client experience of the construction process
- Architecture
- Work environment
- Environment (BEC, 2002:6)

The report reflected a desire for constructing a motivational framing that embraced the interests of all stakeholders. This can be exemplified, as the report outlined how the benchmarking system could benefit a wide range of actors in different ways:

Benchmarking helps clients and consumers, who wish to:

- identify collaborators
- measure their professionalism through the process and product performance

- know best practices in the sector to qualify the demand specifications for future building projects

Benchmarking helps contractors, tradesmen, architects, and consulting engineers and others, who wish to:

- market their competences through the system
- analyze potential collaborators' competences
- use the system to analyze the efficiency of different management tools and collaboration models

Benchmarking helps politicians, who wish to:

- assess the development of the productivity of the sector
- monitor the development of specific areas, such as work environment among leading companies
- measure the efficiency of political tools and initiatives

Benchmarking helps universities, who wish to:

- identify best practices in the sector
- gain statistics on a scientific basis in order to test hypothesis of building processes

Benchmarking helps media and the public, who wish to:

- follow the development of efficiency and quality in construction over time
- follow certain large building and construction projects that invoke public attention

Benchmarking helps professional organizations, such as trade unions, who wish to:

- know best practices in the area of work environment (BEC, 2002:6)

The broad motivational framing that considered a wide range of interests resulted in many different objectives that needed to be attended to by the future benchmarking system. The motivational framing accordingly required a concretizing of benchmarking that embraced several prognostic framings in order to accommodate the demands of all stakeholders. As it will be demonstrated, benchmarking became articulated into and concretized around all three prognostic framings presented in chapter 2 in the analysis.

BENCHMARKING AS A NORMALIZING GOVERNING TECHNOLOGY

Firstly, benchmarking, through analysis and statistical coalitions, was expected to provide transparency of the performance in the construction industry, from which actors were facilitated to gain insight into the performance of building products and building processes. This objective for the benchmarking system reflected the previously mentioned prognostic framing of benchmarking as a normalizing governing technology, which is based on an underlying expectation that the private market, with time, would conform to certain standards of products and processes, as clients and consumers became more qualified to make demands of their bidders.

This prognostic framing of benchmarking reflected an interest in documenting different performance results of the end product, and the objective was clear:

“These measures will generate transparency on the market in regards to the building as a product with different product qualities. This will contribute to a change in the competitive situation from competition on price to a multilateral competition” (BEC, 2002:13).

BENCHMARKING AS A SOCIALLY CONSTRUCTIVE TECHNOLOGY

Secondly, the BEC revealed an ambition for the benchmarking initiative that had been an ambition in Project House and in the Task Force report but had not been very explicit in the preliminary announcements from BEC to that point: Benchmarking was expected to contribute with analyses of the construction industry that were of societal interest. This ambition accordingly carried on the prognostic framing of benchmarking as a socially constructive technology.

These analyses of the overall development of the construction industry were of great interest to Liliegreen (Interview, Curt Liliegreen, Jesper Rasmussen, and Michael H. Nielsen).

“Beside the benchmarking system we are preparing the ground for the centre to conduct a broad spectrum of analysis areas regarding the conjunctures and market condition of the construction sector” (BEC, 2002d).

BEC was accordingly presented as not only a developer and operator of a benchmarking system, but likewise as a centre that conducted analyses of more societal interests. In this way, BEC attempted to widen the political ambitions for both the centre and the benchmarking initiative by positioning the centre as a legitimate and important provider of analyses of the construction industry as a whole. In this way, BEC attempted to undertake a political area of responsibility that had up until then been initiated and managed by the government.

The differences between the two prognostic framings of benchmarking became clear, as the concretization in the benchmarking system called for a division of KPIs:

“It will be proposed that KPIs are divided into two main categories: A) KPIs of significant interest for the individual parties in the construction process (e.g., the clients) and B) KPIs of a more general societal interest” (BEC, 2002b).

BENCHMARKING AS A REFLECTIVE DEVELOPMENT TECHNOLOGY

The report “The Benchmarking System for Construction” revealed a third prognostic framing of benchmarking. This carried the benchmarking ambitions also presented in the Task Force report and Project House: “Benchmarking is a tool for companies to ‘learn best practices’” (BEC, 2002:14). This utilization of benchmarking characterized benchmarking as “process benchmarking,” providing a possibility for construction companies to gain insight into the processes that could lead them to superior performances. It was envisioned that companies profitably could establish “benchmarking clubs” in which they could exchange information and experiences.

“[The establishment of benchmarking clubs] will bring about a greater interest in the system among companies” (BEC, 2002:14).

The benchmarking system was accordingly presented in a prognostic framing that could facilitate a process where underperforming companies could learn how to achieve the same productivity as the best performing companies. This accordingly resembled the prognostic framing of benchmarking as a reflective development technology, which drew on the ambitions of facilitating best practices through detailed analysis and studies of the correlation between factors such as “efficiency of construction projects,” “the organization of the project,” “tendering characteristics,” “level of prefabrication,” “salary systems,” “geographical location,”

etc. (BEC, 2002). The system should facilitate construction companies in comparing themselves against competitors. This could provide the companies an indication of their market position and enable them to compare the performance across a number of construction projects.

Whereas the two other prognostic framings reflected motivational framings that considered benefits for clients, politicians, and society, this prognostic framing considered the interests of private companies.

“The stakeholders of this process evaluation are to a great extent those who are directly involved in the construction project: producers (like contractors and consulting engineers), the labor force and the client. The measures can be used to identify problems in the production and to derive best practices” (BEC, 2002:13).

In this way, benchmarking was presented as a technology that enclosed interests of the full range of stakeholders in very different ways.

As demonstrated, the coexistence of three rather different prognostic framings of benchmarking that had been present in both the Task Force report and Project House was carried on in the development of benchmarking under the auspices of BEC. These diversities of how to perceive the instrumental purposes and overall objectives of benchmarking were, however, not perceived as potentially contradictory or problematic but, on the contrary, were considered to be converging and interrelated in order to meet the overall expectation of attaining higher productivity:

“Benchmarking identifies which problem areas are to be attended to and where learning from competitors is beneficial. Simultaneously, benchmarking generates transparency of the market. The measures produced by benchmarking can be published on a sectorial level and provide a detailed picture of the development of the overall performance of the industry” (BEC, 2002:5).

Despite the rather detailed exposition of measures and definitions in the report, “The Benchmarking System for Construction,” it was stated that this preliminary suggestion to the benchmarking system was to be perceived as final:

“The [proposed] system must be discussed with the theme groups in BEC. After this discussion the system will be tested on a pilot project before it is ready for a more general deployment” (BEC, 2002:3).

Thus, the report was to be considered a preliminary proposal for the concretizing of benchmarking and provided a sketch of the benchmarking system that reflected some introductory ideas and ambitions for benchmarking. The final version of the system was to be developed by the theme group “key performance indicators” consisting of practitioners from the construction industry.

“It is important for us that practitioners from the sector put their fingerprints on this project. BEC has from the beginning been thought to be the construction industry’s centre and to manage the issues [of the industry] on the premises of companies. [...] Above all benchmarking is a management tool and expresses the values in companies’ management. By participating in benchmarking, companies signal that they desire to serve their clients and become more efficient in managing their resources. This signal ought to be valued for any company management” (BEC, 2002:7).

This statement reveals how BEC considered the support from the construction industry to be of great importance. By formulating a vision for benchmarking that could embrace both interests of private and public actors, BEC attempted to form benchmarking as a whole that, in its totality, could increase the productivity development of the construction industry.

4.4.2 THE GOVERNMENT ENGAGES IN THE BENCHMARKING INITIATIVE

An influential factor in the development of the benchmarking system was the release of a governmental report, “The state as construction client – growth and efficiency improvement of the construction industry” (da. Staten som bygherre – vækst og effektivisering i byggeriet) (Regeringen, 2003). As previous, the report concluded that the productivity development in the construction industry was unsatisfactory. With a particular interest in benchmarking, the report pointed at professionalizing state clients by creating better framework conditions and improving their qualifications, in order to facilitate their new role as change agents to influence the traditional distribution of roles and the lock-in situation. This was by no means reflective of a new governmental orientation of the construction policy. The new and important issue was

that, for the first time, benchmarking was directly articulated into the construction policy as a means to qualify clients in making demands to the companies in the construction industry.

The report considered benchmarking to be a central element in changing the competition condition in the construction industry that was accused of being too narrowly focused on price and not sufficiently including quality as a competitive parameter. In line with BEC, the government found that the inexpedient competition was caused by a lack of transparency between price and quality, resulting in dysfunctional market forces. Benchmarking was articulated in a prognostic framing that could address this problem. The prognostic framing was highly similar to the one of benchmarking as normalizing governing technology, qualifying clients in their selections of construction companies:

“It is important to establish some consistent methods that documents experience from previous building projects, in order to provide clients a tool for selecting collaborators. In this way the clients have the possibility to take both price and quality into consideration” (Regeringen, 2003:13).

With this objective, the government propounded two concrete initiatives for state building projects that could facilitate a more qualified selection of companies in the prequalification phase of state building projects. Firstly, contractors were required to hand in KPIs from previous projects in the prequalification that could be used by clients to assess their performance capabilities. Secondly, benchmarking of contractors participating in state building projects was to be mandatory (Regeringen, 2003).

What makes these initiatives interesting was not the aim of using benchmarking as a selection tool for clients, as this had already been suggested in the Task Force report and implied by BEC. The interesting part is, on the other hand, that the governmental report was the first demonstration of a single and coherent prognostic framing of benchmarking that did not explicitly reflect a broad motivational framing. The expected outcome of benchmarking was isolated to an ambition of generating transparency of companies' performances for the purpose of utilizing benchmarking in clients' prequalification of contractors. The government was clear that this utilization of benchmarking relied on a carrot-and-stick approach:

“Assessment of previously accomplished building projects, including KPIs from bidding companies, is a good tool for clients to select the best companies in the prequalification.

Such demands will benefit professional and efficient companies, whereas unprofessional actors are in a weaker position when the competition is relying on these quality parameters” (Regeringen, 2003:43).

Not surprisingly, BEC was incorporated in the governmental vision for more transparency of the market by demanding KPIs on state building projects. It was clearly stated that the benchmarking system developed by BEC was to be used in this initiative.

“BEC is developing a benchmarking system that can be used by clients and companies. The governmental system for gathering KPIs will be developed in collaboration with BEC” (Regeringen, 2003:43).

It was further explicitly stated that state clients were expected to be highly involved and contributing to the development of the governmental benchmarking system and that the political manifestation of the initiative would be an executive order committing state clients to demand KPIs from bidding construction companies.

With these legal requirements for benchmarking in state building activities, the government accordingly became an influential actor in the articulation of benchmarking as a means to provide a better foundation for clients to formulate demands and increase their qualifications in selecting collaborators based on their performance criteria. The governmental enforced utilization of benchmarking in state building projects accordingly entailed a strengthening of the prognostic framings of benchmarking as a normalizing governing technology, as the governmental ambitions for benchmarking relied on changing the competition conditions through potential sanctions (deselection of bidders) and thus providing incentives for the market to adjust their products and processes in an accommodation to the performance criteria of clients.

In January 2004 the executive order became effective. The governmental demand stated that state building projects exceeding DKK 5 million were to be evaluated by the benchmarking system developed by BEC. Further, it was a demand that from July 1, 2005, contractors had to hand in track records from benchmarking projects in order to bid on state building projects. The executive order entailed that contractors needed to hurry in order to bid on state building projects since a building project typically extended over at last one year (Erhvervsbladet, 2004;

Erhvervsbladet, 2004b). This regulative enforced implementation of the benchmarking system consisted of 14 KPIs and 40 supplementing data about the building project.

From the perspective of EBST (en. the Danish Enterprise and Housing Authority), the executive order had three purposes. Firstly, it provided a selection tool for clients that was a central element in the political ambition of strengthening the qualifications of clients and changing the competitive focus on price towards quality performance. Secondly, the executive order was to secure that the system would be disseminated to the private companies partly by prescribing benchmarking on state projects and partly by demanding KPIs from previous projects. Thirdly, the executive order was to generate an earning basis for BEC. It was evident from the beginning that the system had to rely on governmental demands that prescribed public clients to use the system. Without a governmental requirement for benchmarking, the BEC would have difficulties in disseminating the benchmarking system to the industry (Interview, Christian Lerche; Curt Liliegreen; Jørgen Nue Møller; Michael H. Nielsen; Peter Hesdorf). This was, from the beginning, a clear criterion for the dissemination of the system and likewise an important element in creating legitimacy for the centre, which otherwise would be highly challenged if the system were not realized on a larger scale.

“[The success of the benchmarking system] required that it was rooted in an executive order or a law. There was no other way. Nobody thought that it could be realized in any other way. But it is important to remember that this all happened at a time where everybody believed in the idea of state clients as change agents, which was really ‘hot’ at that time” (Interview, Christian Lerche).

In this way, EBST did not contribute directly to the establishment of the centre or to the development of the system, but the agency did indeed contribute indirectly by providing an earning base for the centre consisting of state projects and the necessity for contractors to attain KPIs in order to bid on state building projects.

The strong interdependence between the two actors, BEC and EBST, was manifested by the executive orders. As a consequence, a strong argumentation for disseminating the system to the private market was constructed by providing this regulative incentive for contractors to engage in benchmarking. The basis for the future institutionalization of the benchmarking system was accordingly based on a coercive production and utilization of benchmarking, which BEC in the

following years actively made use of in constructing a common perception among contracting companies that KPIs were a necessity in order for them to bid on state construction projects. The entrance of EBST in the formulation of the instrumental purposes and overall objectives for benchmarking accordingly established a regulative foundation from which benchmarking was considered to be disseminated initially. The normative and cultural-cognitive status of benchmarking as institution, which BEC attempted to attend to in the preliminary formulation of prognostic framings, was hence not explicit in these governmental ambitions.

The below figure is a reconstruction from a BEC slideshow and illuminates how the interrelations between the EBST, BEC, and the board was considered intertwined.

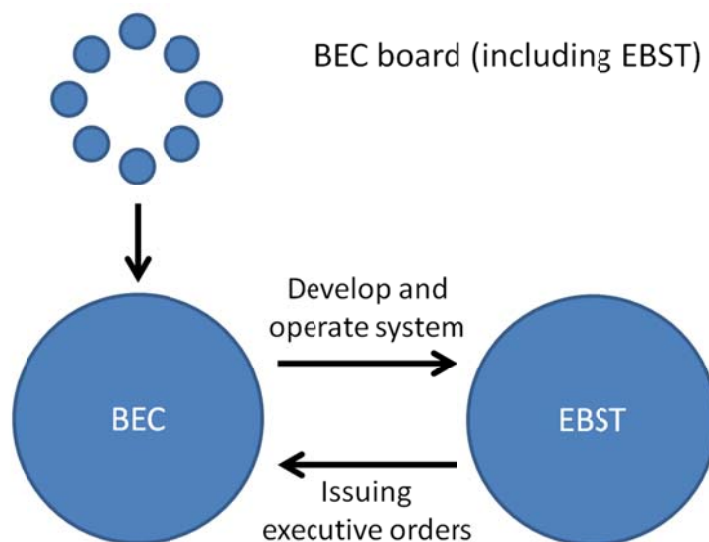


Figure 3: Presentation of BEC

4.4.3 ADJUSTING THE BENCHMARKING SYSTEM TO THE EXECUTIVE ORDERS

At BEC's annual meeting in September 2003, BEC recognized that benchmarking initially could be legitimized by the regulative-enforced dissemination of benchmarking:

“It will be demanded that in order to be prequalified to a state building project companies must be evaluated [...] In the future, construction companies will compete on quality, design, compliance with time, avoidance of accidents and customer satisfactions” (Liliegreen, Berlingske.dk, 2003).

It was an appertaining expectation that the private market would follow and request benchmarking of private building projects.

“Private companies will be pressured to be open about their grades. The pressure will be generated partly by the company stakeholders, who have an interest in a good market position and partly by clients who want to be certain that they choose the best contractors” (Liliegreen, Ingeniøren, 2003)

“The benefits are clear: Those who meet the demands will get preferential position in the competitive biddings in Danish state building projects [...] This type of benchmarking is about making bad companies good. We do not wish to flunk anyone. The system will be used to make everybody better: clients, contractors and medium-sized craft firms” (Liliegreen, Berlingske.dk, 2003).

At the annual meeting it was emphasized that the system was based on the premises of the construction industry and BEC had more than 100 persons and a large number of trade associations involved in the development of the system (Berlingske Tidende, 2003; Berlingske.dk, 2003).

“It has been of highest priority for us to develop a system in a close dialog with actors from the construction industry. It is vital that this system is not perceived as an extra administrative burden. The acceptance from the industry is crucial. The benchmarking system is a part of a political development towards more dialog and understanding between the government and the private market as well as between the different parties in the construction industry” (Liliegreen, Berlingske.dk, 2003).

Despite BEC’s clear enrollment in the governmental prognostic framing of benchmarking, the executive order was not without implications for the other ambitions propounded by Liliegreen:

“The executive order was presented to the board of directors in May 2003. At that time it was not clear to us that it requested that benchmarking was to be conducted on contracts [instead of building projects]. The information we got was that the future executive order entailed that benchmarking would be demanded on state building projects and that bidders should have KPIs for their performance. It was also announced

that bidders should hand in KPIs from previous completed projects” (Interview, Liliengreen).

This had practical consequences for purposes of using benchmarking to extract knowledge on a project level. One consequence was that in order for companies to bid on state projects they needed to obtain KPIs from contracts that in most cases were not subject to the legal requirements. These KPIs accordingly did not include entire projects since they potentially only covered one of many contracts of the project.

“As a consequence you do not have sufficiently information about the totality of the project, and accordingly you must question what kind of knowledge you are able to extract. If all you have is a contract on masonry you simultaneously spoil some of the knowledge about this contract, since the performance on the contract level are affected by the overall time schedule, the project design, the client, consulting engineer, etc.” (Interview, Liliengreen)

The governmental involvement in benchmarking gave rise to a contradictory aspect of the preliminary prognostic framings, as the executive orders’ requirement for conducting benchmarking on contracts accordingly entailed consequences for Liliengreen’s ambition of using benchmarking to extract knowledge about the correlations between the overall performances of building projects and the processes used during the execution of the project. These correlations were considered to be a prerequisite in using benchmarking as reflective development technology, as the extraction of best practices and identification of problem areas was highly reliant on the correlation between the overall project performance, project characteristics, and the processes applied in the project. Accordingly, the governmental intrusion in the design of the benchmarking system was the first concrete example of how the institutionalization of benchmarking was being complicated as one clear political interest was counteracting other instrumental purposes and objectives for the benchmarking initiative. These contradictory interests in the institutionalization of benchmarking became clear, as Liliengreen outlined the consequences of the executive orders:

“I had to sacrifice some of my ambitions with the system. The system was partly linked up to the Lean concept. Some of the things I would like to register about time flows and time consumptions, barriers and hurdles had to be taken out in order to have a

reasonable reporting burden. So the system which was originally intended to include the newest development trends in construction was reduced a great deal as a consequence of the executive order” (Interview, Liliegreen).

“Now I was not only to translate the English system into a real system. I was to construct a far more complex system in order to gather data on the contract level...This also entailed that the system consisting of 102 KPIs needed to be divided” (Interview, Liliegreen).

Accordingly, the executive orders resulted in several modifications of the preliminary benchmarking system.

The modified benchmarking system was presented in October 2003 at BEC’s annual meeting. As indicated by Liliegreen in the above quotation, a main change was that the system was now divided into two packages: 1) A basic package consisting of 14 KPIs about appliance to time schedule, defects, work environment, profit performance, efficiency, price, and client satisfaction. This package accordingly accommodated the governmental interest in benchmarking as normalizing governing technology, as the package fulfilled the requirements of the executive order, and simultaneously kept the report burden down to a minimum, which was a governmental requirement (Berlingske.dk, 2003).

What does the basic package of the benchmarking system consist of? The basic package focuses especially on eight areas of importance:	
Focus area for the KPI	Number of KPIs
Time – compliance with time schedule <ul style="list-style-type: none"> - Deviation from planned and actual execution time - Deviation from planned and actual execution time until completion of registered building defects - Execution time 	3
Quality – building defects <ul style="list-style-type: none"> - Repair of defects in the first year after the handing over process - Registered amount of defects in the handing over process - These defects are categorized according to their severity 	2
Work accidents <ul style="list-style-type: none"> - Accident frequency 	1
Profit performance <ul style="list-style-type: none"> - Contribution ratio - Contribution ratio per work hour - Contribution ratio per kroner in salary 	3

Effectiveness <ul style="list-style-type: none"> - Work hours per m² - Productivity of labor, meaning value increase compared to the labor efforts 	2
Price <ul style="list-style-type: none"> - Changes in the project price during execution - Price level in kroner per m² 	2
Customer satisfaction <ul style="list-style-type: none"> - Measurements of the client's priorities - Measurements of the client's satisfaction on individual areas The measures are added up to one KPI	1
Architecture	Yet not applicable
Total sum of KPIs	14

Table 5: Overview of the content of the basic package (from BEC, 2003)

2) An extended package consisting of an additional 28 KPIs which offered a more comprehensive evaluation of the building project—e.g., for research-related purposes (Interview, Liliegreen).

The extended package accommodated the ambitions of using benchmarking as a reflective development technology, as this package was presented as a tool for companies to identify “best practice” (Berlingske.dk, 2003). However, having an extended package that was not mandatory in state building projects accordingly entailed that the dissemination of this package relied on companies’ self-imposed motivation to engage in this extended benchmarking initiative. The extended package never obtained the interest among construction companies, and accordingly, the benchmarking system quickly became synonymous with the basic package.

The division of KPIs into two packages was a political compromise that was made in order to both meet the requirements of the executive orders and to maintain the prognostic framing of benchmarking as reflective development technology, from which companies could identify weaknesses and improve performances on a voluntarily basis. The ambition of propounding benchmarking as a normalizing governing technology that should be disseminated by regulatory means entailed that Liliegreen needed to cut off a large amount of the mandatory reporting burden, as the government either did not share the ambitions of utilizing benchmarking as a reflective development technology or considered that the reporting burden

in the preliminary proposal developed by BEC was too heavy to be mandatory in all state building projects.

The dissemination strategy of the benchmarking initiative became increasingly identical with the regulatory interests that EBST prepared the ground for. In this way, Liliengreen demonstrated that BEC was in alignment with the perception of benchmarking as a normalizing governing technology that could change the construction industry through demands from clients. This entailed that the instrumental purposes and overall objectives of benchmarking in these years became synonymous with generating transparency and changing the competition conditions of the construction industry:

“The lacking transparency of the market result in discount buildings caused by the inexpedient competition on price exclusively” (Liliengreen, Berlingske Tidende, 2003).

“The benchmarking system is not only a track record but a system that facilitates an overall improvement of the construction sector. Companies are provided an opportunity to look into competitors’ performance, but the information will be anonymized. This will generate a much more qualified competition” (Liliengreen, Berlingske Tidende, 2003).

The calculated and explicitly strategic orientation towards an increasing strengthening of benchmarking as normalizing governing technology became evident, as Liliengreen, on several occasions, expressed the instrumental purposes and objectives of benchmarking in the media. The first example of the increased focus on transparency, change of the competition and utilization of benchmarking in clients’ selection of contractors in the prequalification, emerged as Liliengreen commented on the first conducted evaluation of a contracting company, John Josefsen Aps.

“The fact that it is a small contract shows that the benchmarking system is not only designed for large contracting companies. The small- and medium-sized companies are also provided the opportunity to increase their market competitiveness by obtaining a track record. They will automatically do so because the track record will constitute the tool that the sensible client will make use of when he selects the contractors to work for him” (Liliengreen, 123).

In an article about work environment and work accidents, Liliegreen crystallized the normalizing effect that was expected to be generated by the system:

“How have the companies reacted to the grade book that they are forced to hand in and which is also published to clients when they wish to do state building projects? [Answer:] Contactors, clients and other companies have been positive, because actors in the construction industry have a common interest in bringing down the number of accidents. Simultaneously, it is important that the state lead the way and motivates construction companies to get a better working environment. For this we use the grade book as carrot for companies so they can understand that a good working environment pay off” (Liliegreen, JydskeVestkysten, 2005).

In September 2004 a newspaper did a profile of the managing director of BEC that contained several statements from Liliegreen that supported this prognostic framing of benchmarking as a transparency generating selection tool that could provide incentives to change the competition conditions of the construction industry:

“The companies that either cheat or act neglectfully will obviously not get good KPIs. As a consequence it will be hard for them to win building projects for the state. This is the consequence, and I am fine with it. In order to improve the construction industry, we need to get rid of these unserious companies—the cowboys of construction—who stiffly compete on the price at the expense of everything else” (Liliegreen, Erhvervsbladet, 2004e).

The normalizing effects of benchmarking and incentive to change the competition were further outlined by Liliegreen in another newspaper article:

“Our registration and measuring of different areas will entail that these areas are brought into focus and that inexpediciencies will be corrected. It is both in the end user’s and the construction sector’s interest that this evaluation takes place. In order for the companies to sell their products, they have to hand them in without building failures or defects. And when they are made aware of their problems, they are provided the opportunity to correct them” (Liliegreen, 142).

The prognostic framing that was being highly promoted by both BEC and EBST was based on a central prerequisite: Clients had to use track records in their selection of contractors in the prequalification process in order to generate any normalizing effects. Only by creating a widespread perception among contractors of the interrelation between insufficient track records and competitive position in prequalifications would it be possible to effectuate the desired normalizing effects of benchmarking. Clients' acceptance and acknowledgement of utilizing benchmarking as a selection tool in the prequalification of contractors was accordingly a prerequisite for changing the focus on price by including quality as competitive parameter were preconditions for the system to motivate contractors to accommodate their behavior in correspondence to achieving good performance results. This further necessitated that clients were equally interested and qualified in changing their hitherto traditional practices in the prequalification, which were partly to be generated by the demands to clients in the governmental report 'The State as Construction Client' (da. Staten som Bygherre) (Regeringen, 2003).

During BEC's initial attempts to disseminate the perception of benchmarking as a normalizing governing technology, EBST actively incorporated and supported the strategic orientation in the agency's construction political ambitions by enhancing BEC as a central and vital actor in providing the requested transparency of construction companies' quality performances. This support is exemplified below in a newspaper article where the vice director of EBST stated:

"The competition in the construction industry has been highly focused on price, and the quality has not always been clear to the client. The competition does not work as in other trades, as companies with a bad quality performance are not naturally excluded from the market. The use of KPIs and track records will change this, since these are good standards of reference of the construction companies. The gathering of KPIs is therefore central in the government's construction policy" (Henning Steensig, JyllandsPosten, 2005)

Despite that the imposed regulatory dissemination of benchmarking resulted in challenges in managing and advancing the use of benchmarking as a reflective development technology, Liliegreen did not reject the utilization of the system to derive best practices:

“It is pivotal for me that the benchmarking system identifies of companies’ weaknesses, identify the causes to these and thus provide companies the foundation to subsequently work on improvements. This has to be done by the companies in order to compete on these conditions” (Liliegreen, Erhvervsbladet, 2004e).

The statement reveals how BEC was not either ready to or interested in generating one unifying and coherent strategic orientation for the development and dissemination of benchmarking, by focusing only on benchmarking as normalizing governing technology. This motivation for maintaining the prognostic framing of benchmarking as a reflective development technology was likely a consequence of the continuing political balancing of interests that took place in BEC. The abolishment of the prognostic framing of benchmarking as normalizing governing technology was not unproblematic, as several board members had attained support to engage in BEC by advocating the benefits their member companies could gain from the benchmarking initiative. This is demonstrated in the below quotation from the managing director of Dansk Byggeri:

“We have succeeded in developing a simple and readily available system which can generate the requisite results without many difficulties. But the KPIs produced by BEC are not only to benefit clients. They are to an equal extend to benefit companies as a tool for learning about their strengths and weaknesses” (Jens Klarskov, Berlingske.dk, 2003).

Half a year after the effectuation of the executive order 350 building projects was registered at BEC representing more than 4% of the national sum of contracts. The benchmarking system was appointed a success in the press, and Liliegreen pointed at the executive orders as a contributory cause for companies to register projects for evaluation (Erhvervsbladet, 2004d).

4.5 BENCHMARKING BECOMING AN INFLUENTIAL ACTOR IN THE POLITICAL DEBATE

The previous chapter demonstrated how benchmarking was concretized into a benchmarking system and articulated to address several diagnostic framings of the construction industry.

This chapter is about the operationalization of benchmarking. It will be revealed how the concretizing and implementation of benchmarking gave rise to reactions from different actors with different and diverse interests in the benchmarking initiative. In this way, it will be argued that during the implementation of benchmarking in the construction industry, political struggles emerged as actors expressed political interests in different prognostic framings and simultaneously attempted to delegitimize prognostic framings that they were not supportive of.

The chapter accordingly reveals how some actors considered a lack of a balanced handling of interests in the institutionalization of benchmarking and thus did not consider themselves sufficiently included in the prevalent motivational framing. As a result, actors invested resources in attempts to shape the institutionalization of benchmarking. During its implementation, benchmarking induced a political arena that entailed political struggles between different actors. It will be demonstrated how new actors became politically engaged in the institutionalization and attempted to influence the prognostic framings of benchmarking. The institutionalization of benchmarking became highly dependent on the content and resources put into these political struggles. Throughout this chapter, it will be demonstrated how three political struggles emerged and challenged or reconfigured the diagnostic, prognostic, and motivational framings.

The first political struggle took place as a professional association for social housing clients and the Ministry of Social Affairs reacted to the prospect of including social housing building projects in the regulative dissemination of benchmarking through executive orders. The result of these struggles was a strengthening of benchmarking as a normalizing governing technology.

The second political struggle emerged as contractors interpreted the potential consequences of the system and accordingly opposed the propounded strategic orientation of the institutionalization of benchmarking. The political struggle resulted in political debates in

BEC, as the professional associations carried the critique of their members into the discussions of the board of BEC.

A third political struggle threatening the justification for benchmarking's legitimate existence emerged as consulting engineers and architects were prospected to be subjected to the benchmarking initiative. Again private construction companies were facilitating their political influence by bringing their requirements and criticism into the board of BEC through their respective professional associations.

4.5.1 BENCHMARKING SOCIAL HOUSING BUILDING PROJECTS

In 2007 an executive order for implementing the benchmarking system in the social housing sector became effective. The process of disseminating the benchmarking system to this part of the public construction activities had implications for the preliminary configuration of framings. The inclusion of social housing prompted actors from this sector to challenge certain objectives and contents of the benchmarking system in attempts to adjust the institutionalization to accommodate demands for benchmarking the social housing sector.

The traditional dissemination strategy of construction political initiatives from the previous Ministry of Housing was to implement a political initiative by dividing the dissemination into three phases. First, initiatives were enforced in state construction. As the initiative was tested and implemented, the next step was to disseminate the initiative to social housing. The inclusion of the social housing sector was considered to be an important factor in penetrating the market since the volume of these projects exceeded the activities in state construction multiple times. The third and last step was the inclusion of the private market, as these actors voluntarily would engage in the initiative. The implementation of the initiative in state and social housing projects was thought to have the effect of making the private sector familiar with the initiative and revealing potential benefits of the initiative for companies. The rationale was that it eventually would penetrate as a common practice and thus spread to private construction projects on a more voluntary basis (Interview, Jørgen Nue Møller; Ib Steen Olsen; Karsten Gullach; Jesper Rasmussen; and Peter Hesdorf). The traditional dissemination strategy accordingly reflected a political ambition of generating changes in the construction industry by starting up with a regulative dissemination strategy of new structures that eventually would penetrate as both normative and cultural-cognitive guidelines for rational behavior in the construction industry.

After the effectuation of the executive order, a process started in EBST with the initial consideration of implementing the system in the social housing sector. But as a consequence of a ministerial reorganization, social housing was moved away from EBST and placed in the Ministry of Social Affairs. Consequently, the construction political decisions that involved both state and social housing building projects had to be arranged in a collaboration between the two ministries.

Due to the traditional dissemination strategy of construction political initiatives, it was evident that the benchmarking system, at some point, was thought to embrace the social housing sector (SBI, 2005). But the above-mentioned traditional model for disseminating construction political initiatives was threatened as the Ministry of Social Affairs was not to the same extent as was previously politically obliged to carry on implemented political initiatives in state building projects to the social housing sector. But in spite of the more politically independent role of the social housing sector in the construction policy, the Ministry of Social Affairs was willing to implement the benchmarking system. According to Jesper Rasmussen (Interview), former vice director of EBST, this political choice was by no means obvious but should be ascribed a personal and historical interest in maintaining the traditional model for disseminating political initiatives to the construction industry.

A close collaboration and verbal agreements prior to the moving of the social housing policy entailed that the director of the construction committee in the Ministry of Social Affairs, Frank Bundgaard, chose to implement the system in the social housing sector (Interview, Jesper Rasmussen). But the implementation was not without implications. Gert Nielsen, who was managing director of the powerful and politically influential BL (National Housing Association), embracing nearly all social housing organizations in Denmark, resisted an implementation of the existing benchmarking system in the social housing sector (Interview, Jesper Rasmussen).

“It was evident that there were opposite perceptions of whether the system implemented in state construction would provide value for the social housing sector. Accordingly, a negotiation process between Curt Liliegreen and Gert Nielsen from BL took place” (Interview, Karsten Gullach).

Accordingly, supported by Nykredits Fond and initiated by BL and a large number of clients from the social housing sector, a development of a benchmarking system specifically addressing the social housing sector took place in the beginning of 2004 and was carried out by SBI. The suggested system was concluded in the report, “Benchmarking system for social housing building projects” (da. Nøgletalssystem for boligbebyggelser) (SBI, 2005), which was a politically motivated response to the benchmarking system implemented in state construction.

“The social housing sector agrees on the intention to strengthen the quality and efficiency in construction and also wishes to participate in developing a well-functioning evaluation system” (SBi, 2005:8).

The proposed system had five main objectives:

- The system should accommodate the needs of the social housing clients, facility managers, and end users of the building.
- It should provide an assessment of the quality of the building.
- The system should be based on total openness and transparency in a digitalized form, which could be presented on the Internet.
- 70% of the registration requirements should be reused from existing registers.
- The administrative burden for social housing organizations and private parties from the construction industry was not to be increased by the implementation of the system. (SBi, 2005:5)

The motivation for these actors to engage in a development of a benchmarking system for the social housing sector was illuminated by the below-mentioned quotation:

“Total transparency is a central element in [the proposed benchmarking system]. This entails that all data, benchmarking and conclusions that inform about best practices will be public available. This will be further strengthened by an active utilization of the KPIs and an establishment of a public available website. Another central element in the system is reuse of information from existing registration systems, since the majority of the information in the proposed system are information from existing registers. This will reduce the costs for gathering information to the system” (SBi, 2005:5).

This quotation illuminates the motivational framing that prompted the actors to develop a system for the social housing sector. The motivational framing was based on the social housing sector’s historical ambition of total transparency of the data reported into the social housing reporting system, BOSSINF. BOSSINF was an administrative reporting system that had been used for several years by clients of social housing building projects to report project information. With the proposed benchmarking system, BL and the Ministry of Social Affairs advocated a prognostic framing of benchmarking that to a greater extent than previously

supported transparency, whereas BEC was more cautious about making company specific data public available.

Further, the response from BL and the Ministry of Housing revealed how actors from the social housing sector were interested in reusing data that was already reported into BOSSINF, and with the proposed benchmarking system, the actors sought to reduce the reporting burden of the benchmarking system by incorporating data from BOSSINF into the benchmarking system. This represented an interest in reducing the administrative burden of the benchmarking system used in state construction and potentially threatened the ambitions of utilizing benchmarking to conduct in-depth analyses of societal interests, as the suggested benchmarking system would entail inconsistency of data used to gain insight into the correlations between productivity, building project characteristics, performances, or other. If the social housing sector succeeded in establishing a benchmarking system that relied on data from BOSSINF, it would minimize the possibilities to conduct analyses across state and social housing building projects, as the data from these would not be identical. The inclusion of the social housing sector could accordingly threaten the utilization of benchmarking as a socially constructive technology, as overall analyses of the construction industry relied on consistent data from building projects.

In December 2005 the Ministry of Social Affairs sent out a preliminary proposal for an executive order that incorporated benchmarking in the future social housing building projects⁷. It was evident that the proposal had several similarities with the proposed system in the SBi report. The proposal caused BEC and several board members of BEC to raise three points of criticism that they considered to counteract their interests in BEC and the institutionalization of benchmarking.

Firstly, one of the bones of contention was the prospect of incorporating the benchmarking system in the existing registration system, BOSSINF, which was a clear request for implementing benchmarking in the social housing sector:

“It is no secret that we want a very efficient system. We already have an administrative control system for public funded construction, so it is just a matter of putting some extra data into the system. The system practically already exists” (Frank Bundgaard, *Erhvervsbladet*, 2006a).

⁷ Hearing statement available from: <https://bdkv2.borger.dk/Lovgivning/Hoeringsportalen/Sider/Soeg.aspx/>

BOSSINF was considered a ministerially supported competitor to BEC entailing unfair competition on the market for benchmarking building projects (hearing statement BEC and hearing statement ByggematerialeIndustrien, Danske Ark, Dansk Byggeri and F.R.I.⁸). The proposal for the executive order prepared the ground for social housing clients to report data into BOSSINF, which were subsequently published by The Danish Building Defects Fund (da. Byggeskadefonden). This constellation of the reporting and publication process was considered to constitute a competing benchmarking operator, as the functions of BEC were thus obviated in benchmarking social housing building projects.

“We are surprised to ascertain that the Ministry of Social Affairs prepares the ground for a governmental investment in expanding BOSSINF so that this system cost free for companies can generate KPIs. This will result in a potential fatal competition for BEC, which we have established by request of the government. [...] This will entail that it is unlikely that contractors or small handcraft companies voluntarily choose BEC to benchmark private projects or project for municipalities for payment. Today the non-governmental supported projects represent 80% of the projects benchmarked by BEC. In this way BEC can end up being economical affected by the proposal from the Ministry of Social Affairs” (Appendix B – in Danish).

These reactions forced the Ministry of Social Affairs to respond:

“We do not design a competing system. On contrary we seek to make the two things interact. The system we suggest does not produce track records. Therefore the system will not offer a free service of this product” (Frank Bundgaard, Jyllands-Posten, 2006).

Supported by the professional associations, the second point of criticism was raised in BEC’s hearing statement to the proposed executive order. An explicit ambition in the executive order was high parallelism between the executive order for benchmarking state building projects and the executive order for benchmarking social housing building projects—but with respect for the special conditions relating to social housing building projects. BOSSINF were to be expanded so the system consisted of the data necessary to generate the needed KPIs (hearing statement BEC). The definitions of the KPIs were to be identical or compatible with those collected in state building projects (hearing statement BEC; hearing statement ByggematerialeIndustrien,

⁸ Hearing statement available from: <https://bdkv2.borger.dk/Lovgivning/Hoeringsportalen/Sider/Soeg.aspx/>

Danske Ark, Dansk Byggeri and F.R.I.). But in BEC's hearing statement a concern of this ambition was put forward: Although the definitions of the KPIs were identical, the system would not generate the KPIs on the same premises as conducted by BEC since the calculations relied on a number of individual choices that were not defined in the executive orders. Consequently, the benchmarking conducted by BEC and the benchmarking conducted by the social housing sector triggered a discussion of whether the implementation of the benchmarking system would result in two separate systems that did not produce comparable KPIs, and accordingly generated challenges in maintaining a consistent benchmarking process (hearing statement BEC).

This critique was also in the press, as Christian Lerche from Danske Ark stated:

“We highly support that KPIs are used widely in the construction industry, and we therefore have an interest in disseminating the use of KPIs. But we are also strongly opposing multiple designs of benchmarking systems in a small country like Denmark” (Christian Lerche, *Erhvervsbladet*, 2006a).

The suggested process of gathering data in social housing also deviated from the one in state construction, as it was proposed that clients reported the information to BOSSINF and accordingly had to request all of the information to the benchmarking system from the contractors and subcontractors affiliated with the project. This reporting procedure was considered to generate potential consequences for the validity of the data reported to the system:

“It can affect the reporting process when the contractor knows that all information is presented to the client. In the worst case scenario, the respondent can choose to report incorrect information, because he does not wish that the client is provided detailed knowledge about the company's internal conditions. This scenario is avoided when using an impartial evaluator” (BEC hearing statement).

Accordingly, the benchmarking system faced a utilization challenge, as the suggested system for social housing building projects was considered to influence a central precondition for any of the three prognostic framings of benchmarking: comparisons of data. Such comparisons rely on accuracy and consistency of the handling and calculation of data.

The third point of criticism was about the publication of the KPIs. The Ministry of Social Affairs was very intent on publishing the benchmarking results, which was conventional in the social housing sector. This issue was controversial as several actors from the private market opposed the idea of a publicly available database consisting of company-specific information from their member companies (Interview, Karsten Gullach).

“BEC ascertains that all information in BOSSINF is publicly available, thus the considerations of confidentiality in the system for state construction will not be maintained in the benchmarking scheme for social housing” (hearing statement BEC).

The prospect of publishing KPIs on The Danish Building Defects Fund’s web page accordingly entailed a concern of providing confidentiality of companies’ individual conditions and company-specific information (hearing statement BEC). Total transparency of all reported information in the benchmarking system was partly requested by the social housing sector as BL advocated for making the most possible knowledge about public funds available to the public. But total transparency was simultaneously requested in order to strengthen the utilization of benchmarking as a selection tool for clients, as this was considered essential for providing the best foundation for clients to use the benchmarking system for selecting contractors (SBi, 2005). This prerequisite thus entailed a contradictory aspect of benchmarking, as confidentiality considerations in the benchmarking system for state construction was made in order to secure that companies had sufficient incentives to engage in benchmarking on a voluntary basis. Total transparency was accordingly considered to obstructing companies’ voluntary engagement in conducting benchmarking.

After the critical hearing statements, the Ministry of Social Affairs initiated a co-ordination committee in order to cope with the critique. And in March 2007 the Ministry of Social Affairs presented the executive order for benchmarking the social housing sector⁹. The executive order had a much higher similarity to the one on state construction and reflected a political negotiation that did not compromise the consistency of data maintained in a coherent governmental interpretation of the instrumental purposes and objectives of benchmarking. In this way, the inclusion of the social housing sector successfully maintained and strengthened the prognostic framing of benchmarking as normalizing governing technology and additionally

⁹ The executive order can be found at: <https://www.retsinformation.dk/Forms/R0710.aspx?id=20821>

did not compromise the utilization of benchmarking in providing socially constructive analyses of productivity, as the data was consistent for state and social housing building projects.

BEC's satisfaction with the inclusion of the social housing sector in the benchmarking initiative without compromising the preliminary institutionalization of benchmarking and still maintaining BEC as a benchmarking operator for social housing was clearly stated by the vice director of BEC in a newspaper article:

“It is an important step for benchmarking that all large social housing building projects are now going to be evaluated in the future. For BEC this entails that our annually production is tripled from 400 evaluations to approximately 1200 evaluations a year.” (Peter Hesdorf, Licitationen, 2007b).

A small compromise in the political negotiations was, however, an outcome of the inclusion of the social housing sector:

“The data collection in social housing building projects is a little different than it has been on other building projects that have been evaluated by the centre. This is because the social housing sector already reports data that can be used for benchmarking. Such data will of course be used as much as possible to avoid duplication of work” (Peter Hesdorf, Licitationen, 2007b).

As demonstrated, the inclusion of the social housing sector gave rise to political struggles and was not without implications. However, the modifications of the institutionalization were kept to a minimum as political struggles with actors from the social housing sector had to be managed and politically negotiated. As a result, the dissemination of the benchmarking initiative reflected a strengthening of disseminating benchmarking as a normalizing governing technology, providing increased transparency of contractors' performances and spreading the utilization of track records as selection tool for state and social housing clients. In this way, the regulatory dissemination of benchmarking was strengthened, as the incentives for private companies to pursue good KPIs for enhanced competitive positions in future prequalifications were increased.

4.5.2 CONTRACTORS RESPOND TO BENCHMARKING

In April 2004, shortly after the effectuation of the executive order for benchmarking in state building projects, benchmarking faced the first critique from the contractors. This critique was particularly interesting, as it revealed some of the pragmatism that was prevalent and considered necessary in order to institutionalize benchmarking in the construction industry.

The critique was about the extent of the system and was raised by the two trade associations: Dansk Byggeri and Tekniq. On request from small- and medium-sized contractors, these two professional associations opposed the minimum limit for when contracts were to be included in the executive order. The critique was accordingly about the administrative burden of the benchmarking system (Erhvervsbladet, 2004a). The administrative burden was exemplified by the contractor company, A/S Julius Nielsen & Søn, who clearly expressed an overall discontentedness of being subjected to benchmarking and the time consumption required in reporting to the benchmarking system:

“If I as a general contractor use one hour to report information, 20 other companies conducting the individual trade contracts need to do so as well. This system has been fobbed off on us. Therefore I also wonder why we are also requested to pay DKK 10,000 to BEC for the evaluation” (Jan Lindgaard, A/S Julius Nielsen & Søn, Erhvervsbladet, 2004b).

The critique was a clear response to the regulatory advancement of the benchmarking system that contractors perceived as an unjust administrative burden. The critique was controversial, as BEC found it crucial for the acceptance of the system that the perception of the system as an administrative burden did not occur, as the system was designed on the premises of the market and was to benefit the participants (BEC, 2002). Thus this critique became an issue for EBST to handle since they were responsible for this regulatory advancement of the system through executive orders. Accordingly, EBST minimized the proportions of the executive order. The governmental demand for evaluation discarded companies with less than ten employees—equaling 22.000 out of 26.400 construction companies (83%) on the Danish market (Erhvervsbladet, 2004c; Berlingske Tidendes Nyhedsmagasin, 2004).

This example provides decisive insight into how the interests of private companies were taken into consideration and how the private market was provided a political position to gain

influence on the institutionalization by exploiting the ambition of achieving acceptance of benchmarking from private actors.

During the first years of the operational phase of the benchmarking system three central events took place that constituted potential threats to the institutionalization of the benchmarking system. It will be demonstrated how these three events ended up partly influencing the configuration of the prognostic framings of benchmarking and partly motivated contractors to consolidate their interests in attempts to reject or delegitimize other actors' attempts to promote prognostic framings of benchmarking. In the following, these three events will be unfolded together with a discussion of how political struggles entailed consequences for the institutionalization of benchmarking.

The first event was constituted by a reaction from two professional associations that actively attempted to challenge the prognostic framing of benchmarking as normalizing governing technology by questioning whether benchmarking was actually used as a selection tool in prequalification processes. The second event was a reaction from a contractor who opposed benchmarking of some of their projects. It will be argued that this potentially threatened the applicability of the benchmarking system as a selection tool for clients and its ability to provide accurate transparency of performance. The third event was caused by BEC's attempts to advance benchmarking as a socially constructive technology through analyses of the construction industry. The results from these analyses prompted actors from the private market to respond and question the conclusions of the analyses.

DELEGITIMIZING BENCHMARKING AS A SELECTION TOOL FOR CLIENTS

The prognostic framing of benchmarking as a normalizing governing technology was conditional on a functioning interplay between the regulative dissemination strategy represented by the executive order and contracting companies' normative conformity to the measures. As earlier described, it was a prerequisite that contractors perceived that track records were utilized in assessments of their performances. This prerequisite was, however, challenged as two professional associations represented in the board of directors of BEC, Danske Ark and Dansk Byggeri, criticized the benchmarking initiative in October 2006. The critique constituted a political struggle as the two actors characterized the benchmarking initiative as an unnecessary administrative burden for contracting companies since these

companies did not experience an equal engagement from clients to use the system in the prequalification process (Børsen, 2006). Danske Ark and Dansk Byggeri accordingly attempted to delegitimize the prognostic framing of benchmarking as a technology that provided clients a foundation for a more qualified selection of contractors based on their performances.

The raised critique can be regarded as a politically motivated response to the institutional environment that benchmarking made contractors subjects to. Dansk Byggeri and Danske Ark attempted to reconfigure the prognostic framings of benchmarking by advancing arguments that delegitimized one of the central ambitions for benchmarking: qualifying clients in selecting contractors by providing them transparent information on the correlation between contractors' price, quality, and performance.

With an underlying interest in weakening this prognostic framing, the two associations attempted to establish a political discussion that questioned and could potentially threaten BEC's and EBST's attempts to institutionalize benchmarking as normalizing governing technology. By introducing these challenging perceptions of the benchmarking system, the prognostic framing was delegitimized as the diagnostic framing of clients' needs for a technology that qualified their ability to select contractors was suppressed. The potential consequence of such delegitimization was a lack of incentive for contractors to accommodate with, pursue, and voluntarily request KPIs, as deviations from the structures had no economic consequences in future prequalifications. Such a scenario would eventually undermine a legitimization of benchmarking as a technology that accurately translated building projects into KPIs that could be used by clients to assess the performance of contractors.

The concurrent preparation of the implementation of benchmarking in the social housing sector made the timing of the critique politically sensitive, as several actors from the social housing sector also criticized benchmarking for not functioning for contractor selection. The accusation of this lacking utilization of the track records in the prequalifications constituted a clear threat to the political ambition of conforming contractors to achieve good KPIs, as this relied on clients' utilization of track records in their prequalifications to provide economic incentives for contractors to adjust their production and processes towards compliance with clients' demands to KPI standards.

The delegitimization of benchmarking as a normalizing governing technology was further strengthened when a governmental report on state-initiated development activities supported the critique of insufficient utilization of track records by clients. The report, “Assessment of construction political initiatives: PPP, Partnering and KPIs,” (da. Evaluering af statslige byggepolitiske initiativer: OPP, Partnering, Nøgletal) (EBST, 2006) contained an assessment of the benchmarking initiative. The conclusions drew on practitioners’ opinions of benchmarking and pointed to three overall characteristics of the preliminary utilizations and interpretations of the initiative. The effect of disseminating benchmarking by means of the executive order was considered a success, as the participating clients contributing to the study had a high degree of acquaintance with the benchmarking initiative through their systematic demands of KPIs from contractors. But this success of the regulative-determined dissemination was not followed by a similar degree of expedient utilization of the KPIs as a selection tool. On a scale from 1–5, the assessment of the positive effects that benchmarking was considered to cause was given a low 1.8.

The report supported and legitimized Dansk Byggeri’s and Danske Ark’s critique of the prognostic framing of benchmarking as selection tool for clients.

“One of the central implications of a successful implementation of the benchmarking system is that the system has not yet obtained status as a proper tool in the construction industry. One the one hand, clients only secure that contractor’s hand in KPIs, but they do not use these in the prequalification. One the other hand, contractors only secure that they have KPIs, but only to a very little extent do they use these internally in the company as evaluation tool” (EBST, 2006:30).

The quotation reveals that the report engendered a decisive challenge for the institutionalization of the benchmarking system, as actors in the construction industry clearly deviated from the expected normalizing behavior that was to support benchmarking as a selection tool for clients: If actors did not support and reproduce the structures of the prognostic framing by acting in accordance to the rationales of the executive order, they simultaneously did not contribute to a stabilization of benchmarking as a legitimate selection tool for clients.

CHALLENGING THE VALIDITY AND ACCURACY OF BENCHMARKING

Only one month after the critique from Dansk Byggeri and Danske Ark, benchmarking was yet again challenged. This time the critique was not raised by professional associations but by one of the largest contractors in Denmark, NCC. The conflict emerged as NCC refused to go through with benchmarking due to dissatisfaction with the number of defects registered by the client, the Prison Service (Horsens Folkeblad, 2006).

“There is no reason for us to accomplish benchmarking of a building project if we have an arbitration case with the client. We consider the KPIs as a customer satisfaction survey, and what is the point in completing such one, if we already know that the client is dissatisfied with us?” (Morten Chrone, NCC (Ritzaus Bureau, 2006a).

The deselection of benchmarking can be understood as a calculated action from NCC. NCC clearly did not agree upon the number of defects registered by the client. And by considering the consequences of bad KPIs in future prequalifications, NCC chose to make use of an administrative possibility to cancel benchmarking on projects where there were disagreements between the contractor and the client. But this administrative possibility entailed several complications for the functioning of the benchmarking system since such deselection could potentially destabilize several prognostic framings of benchmarking.

NCC's deselection of benchmarking would potentially have three implications for the benchmarking system if this was to become common practice for contractors to deselect benchmarking in case of prospects to bad KPIs. Firstly, NCC's action was an indication of a consideration of the potential consequences of having bad track records in future prequalifications. But by deselecting benchmarking, NCC expressed a deviating normative behavior by undermining the moral or ethical sensibility in continuing the benchmarking process, despite disagreements with the Prison Service. By deselecting benchmarking, NCC simultaneously refused to conform their behavior in accordance with the rationales of benchmarking as providing legitimate reflection of their performances. Many deselections of benchmarking would eventually hinder the usefulness of the system's ability to reflect contractors' performance, as the KPIs would only represent performance capabilities from projects without bad performance. NCC's deselection of benchmarking can accordingly be

regarded as an attempt to deviate from the institutional preconditions in which they were embedded through the structures of benchmarking as normalizing governing technology.

Secondly, by undermining the legitimacy of benchmarking as a selection tool, NCC simultaneously eroded the data foundation for utilizing benchmarking as a technology providing truthful information about performance standards from which best practices and process insight could be derived, as this required objective comparisons of the full range of building projects being benchmarked. A lacking representation of projects with bad performance would engender a distorted picture of performance standards. This prognostic framing of benchmarking as a reflective development technology was further challenged as NCC expressed their conception of the benchmarking system as a customer satisfaction survey and thus implicitly opposing the system as a technology for contractors to identify weaknesses and providing knowledge to initiate changes in the striving for best practices.

Thirdly, and related to a lack of representation of poor performances, the prognostic framing of benchmarking as a socially constructive technology was likewise challenged if the database did not contain the full range of building projects, and accordingly did not provide a truthful reflection of the industry as a whole.

The possibility of deselecting benchmarking was accordingly a potential threat for the institutionalization of benchmarking. NCC's deselection of benchmarking had entailed a political problem that needed to be attended to if benchmarking was to maintain legitimacy of its prognostic framings. The issue prompted actors with an interest in benchmarking to oppose contractors' opportunity to deselect benchmarking, exemplified by a client, the Agency for Universities and Buildings (da. Universitets- og Bygningsstyrelsen, UBST), who also experienced that NCC opposed benchmarking on one of their building projects.

“We insist on accomplishing benchmarking of the building project. The system cannot withstand that contractors simply refuse benchmarking because of some problems with the construction process. When contractors say ‘A’ they must say ‘B’ as well” (Lars Ole Hansen, UBST, Licitationen, 2007).

The critique of the insufficient utilization of the track records for contractor selection and the consequences of continued deselections of benchmarking entailed other politically motivated actors to mobilize resources into legitimating the challenged prognostic framings of

benchmarking as normalizing governing technology. It will be demonstrated that the result of these political actions and negotiations was a stronger orientation towards a strengthening of the regulative dissemination of benchmarking as a normalizing governing technology and a closer collaboration between certain actors in articulating this strategic orientation of the institutionalization.

In order to cope with NCC's deselection of benchmarking, the board of directors in BEC outlined new guidelines that prevented contractors to make use of the opportunity to deselect benchmarking in the future, and instead had to be benchmarked regardless of their discontent with the KPIs.

“It has never been the idea that contractors could back out of benchmarking. There has been an administrative possibility for contractors to postpone benchmarking, but it has never been meant as an opportunity to refuse benchmarking of building projects with an unsatisfactory performance” (Curt Liliegreen, Licitationen, 2007).

The clients, represented by Bygherreforeningen (en. The Danish Association of Construction Clients), engaged in the political struggle and supported Liliegreen by opposing NCC's use of the opportunity for contractors to refuse benchmarking.

“It is important that benchmarking is taken seriously because it is a very useful tool. Therefore it is important for us that contractors cannot deselect benchmarking. It constitutes a glorified picture of contractors' performance if they do not report data from projects with bad KPI” (Henrik Bang, Bygherreforeningen, Licitationen, 2007a).

Hitherto Bygherreforeningen had not been particularly active in the development of benchmarking and had not engaged in the preliminary political struggles that had taken place. However, the prospect of delegitimizing benchmarking as a selection tool for clients prompted this actor to engage in the political struggles. According to Henrik Bang (interview), benchmarking had been discussed and criticized much in Bygherreforeningen's early years (Bygherreforeningen was established in 1999). Particularly, private clients opposed benchmarking, as they considered it to be a governmental imposed and rigorous system that was hindering clients in making individual, rational choices in the prequalification of contractors. They found it offensive that clients were to be subjected to this coercive control of the prequalification process and even by a system that did not provide the information that

could be useful in selecting contractors (Interview, Henrik Bang). But over time the discussions in Bygherreforeningen about benchmarking became less intense and replaced with a more common acceptance of the system as an element in generating transparency of the market and legitimating clients' decisions in the prequalification processes (Bygherreforeningen, 2009).

From a political perspective, the timing of this declared support from a clients association was crucial for advancing benchmarking as a normalizing governing technology. By supporting and legitimating this prognostic framing from a client point of view, Bygherreforeningen neutralized the criticism raised partly by Dansk Byggeri and Danske Ark and partly the conclusions from the report on state initiatives, criticizing state clients for lacking utilization track records in their prequalifications.

Throughout the development of the benchmarking system Dansk Byggeri had insisted on maintaining this opportunity of deselecting benchmarking for their member companies (Interview, Michael H. Nielsen). But as the practical consequences of this opportunity emerged, other actors were forced to react. The political negotiations resulted in a maintaining of the opportunity for contractors to deselect benchmarking but with the appertaining consequence that aborted benchmarking processes should clearly appear in the track record. This had the ulterior motive of removing much of the incentives to deselect benchmarking, as contractors with aborted benchmarking processes could risk negative assessments of their KPIs in case of clients interpreting such information negatively. Accordingly, the end result of the political negotiation favored the prognostic framing of benchmarking as normalizing governing technology, as the motivations for contractors to deviate from the normalizing behavior were greatly eliminated.

The critique raised against benchmarking illuminated the diverse interests represented in BEC's board of directors. It also revealed that BEC could not single-handedly manage the pressure put on the benchmarking initiative by actors who had political interests in changing the institutionalization. As a result of the political struggles, an alliance between BEC, Bygherreforeningen, and EBST was established as the development and utilization of benchmarking no longer had an undisputed support from the board members. These three actors joined forces in advancing benchmarking as a normalizing governing technology and maintained the ambition of changing the competition by providing transparency between price and quality through benchmarking.

The continued governmental support to institutionalize benchmarking as a normalizing governing technology was further revealed in the governmental action plan, “Better and cheaper buildings” (da. Bedre og billigere byggeri) (Regeringen, 2007). The report used several analyses from BEC as support for claims of poor quality and low productivity in the construction industry. BEC and benchmarking were highly incorporated in the governmental strategy for the construction industry and characterized benchmarking as a driving force in encouraging companies to compete on quality performance and simultaneously provide the state clients with a better foundation for selecting collaborators on the basis of a combination of their price and performance on quality (Regeringen, 2007). In this way, the report was a clear contribution to the institutionalization of benchmarking as a normalizing governing technology and reflected an undisputed governmental interest in benchmarking the construction industry for the objective of generating transparency of construction companies’ quality performances:

“KPIs generate transparency of the quality that companies provide the client. KPIs facilitate a foundation for selecting those companies that are most suited to perform any given task” (Regeringen, 2007:52).

The action plan once again appointed clients as the central driving forces in providing the incentives for companies to conform to KPI standards. This entailed that utilization of KPIs in prequalifications needed to be increased. But unlike the previous legal requirements that only prompted state clients to gather KPIs from contractors, the government advanced a much more aggressive utilization of the benchmarking system by making it mandatory for state clients to actively use KPIs from contractors as a selection criterion (Regeringen, 2007:54). With this change, the government attempted to cope and respond to the rising critique of state and social housing clients’ preliminary insufficiency in utilizing KPIs as a selection criterion.

The action plan had three other important future prospects for benchmarking. Firstly, the benchmarking initiative was to be extended so that it, in the future, also included KPIs on consulting engineering companies and architectural companies. This system was not concretized in the report, as the development was to take place in consultation with BEC and actors from the industry (Regeringen, 2007:54). Secondly, a governmental request was that KPIs were to be published in order to provide transparency. Total transparency was required in order to facilitate the knowledge foundation for companies to compare themselves to their competitors.

“This will enable all clients (including private clients) to include KPIs in their selection of the most qualified companies” (Regeringen 2007:54).

The timing of this political announcement must be seen in the light of the recent successful dissemination of the benchmarking system to the social housing sector since the number of construction companies with KPIs was considered to increase dramatically as a consequence of this inclusion of social housing building projects. This was considered a prerequisite for clients’ use of benchmarking in the prequalification process, as an increase of companies with KPIs would secure that bidding companies were not to be deselected because of lacking documentation requirements for KPIs (Regeringen, 2007). So far state clients had had difficulties in avoiding discrimination of bidding contractors that did not have KPIs. This preclusion for using benchmarking was now handled by the dissemination of the system to the social housing sector and by providing an opportunity for bidders to hand in “information corresponding the KPIs from BEC” (Regeringen, 2007:54).

Thirdly, the report stated that state and social housing clients in the future would be subjected to benchmarking by a systematic benchmarking corresponding to the system for contractors, consulting engineers, and architects. “This [in regards of being measured] will generate an equal status of the participants of the building project” (Regeringen, 2007:54). In this way, the report prepared the ground for a high degree of coherence between the KPIs for the different participants of the project.

Liliegren recognized the future prospects of benchmarking outlined in the action plan and legitimized benchmarking and BEC through the politically initiated strengthening of benchmarking towards a normalizing governing technology:

“Many have called for more active use of the KPIs in the prequalification process. Now it is an important element in the construction policy. There is a great difference between being obliged to demand KPIs and being obliged to actively use KPIs. I interpret it as a governmental vote of confidence that we in BEC, in collaboration with the parties in the construction industry, have succeeded in developing a well-functioning system and a foundation for further development of benchmarking” (Curt Liliegren, Licitationen, 2007c).

The above statements from the three actors (Byggherreforeningen, the government, and BEC), can be regarded as an uncontested promotion of benchmarking as a normalizing governing technology. The consolidation of these three actors was a necessary political response to opposing actors' attempts to delegitimize the benchmarking initiative and also repositioned BEC as a legitimate actor in driving the future development activities of benchmarking. The consolidation indicated an objective of formulating a more coherent frame of benchmarking, resulting in a lower priority of articulating the benchmarking in a motivational framing that had equal support from all stakeholders. In the interview with Liliegreen, he supported the notion that a consolidation was necessary and that BEC could not manage the conflict without external support from stakeholders.

“When I reflect on the course of events, then it shows how important it is that EBST engages in this critical discussion raised by the actors in the construction industry. An initiative as BEC cannot act independently and critically to the market interests on a longer run. That role is and always will be a matter for the authorities” (Interview, Curt Liliegreen).

This statement, and the consolidation of interests, indicates that BEC's political position did not stand the pressure when critiques of a more politically sensitive character arose from powerful political actors. The representation of diverse interests among the board members entailed that BEC to a larger extent was important in committing and engaging the professional associations and their members in benchmarking. To a lesser extent BEC could single-handedly legitimize the institutionalization of benchmarking.

CHALLENGING THE APPLICABILITY OF BENCHMARKING AS A SOCIALLY CONSTRUCTIVE TECHNOLOGY

In 2006 another political struggle emerged, as private actors attempted to delegitimize BEC as a truthful provider of analyses of the construction industry.

One of the original objectives of BEC, and a personal interest of Curt Liliegreen, was to utilize the data in the benchmarking system to generate analyses about the productivity development of the construction industry. The increasing number of projects in BEC's database facilitated such knowledge production, and the reports were published on the BEC website. The releases of the analyses, however, gave rise to skepticism regarding the veracity of the data as actors

from the construction industry opposed the results as general reflections of the construction industry. The analyses demonstrated BEC's political engagement in providing analyses of the construction industry that could have societal and political interests.

Below, it will be demonstrated how BEC's analyses entailed conflicting perceptions of benchmarking's capacity to produce knowledge about the construction industry and accordingly challenged benchmarking as a socially constructive technology.

BEC released several analyses of the data from the benchmarking system¹⁰. The development in building defects got massive interest from the media, the professional associations, and the authorities, as BEC in 2006 reported that the amount of non-critical defects had increased by 74 % since 2005 and the amount of critical defects by 400% (Ritzaus Bureau, 2006; Berlingske Tidende, 2006; Dagbladenes Bureau, 2006). Further, the analyses accounted for a 100% increase in work accidents. In the communication of these results, Liliegreen utilized the analyses to comment on the overall development of the construction industry:

“The financial boom has affected the performance of the construction industry and has resulted in an increase of defects and work accidents. Our data clearly reveal that the performances of these two areas are going badly and need to be attended to in the future” (Curt Liliegreen, Ritzaus Bureau, 2006).

By utilizing the data from the benchmarking system to conduct and present analyses that accounted for an overall development of the construction industry's performance capabilities, a discussion about benchmarking as a provider of general knowledge about the construction industry emerged. A response from Dansk Byggeri indicated a stance that challenged Liliegreen's reliance on utilizing the data to comment on an overall tendency of the construction industry's performance.

“The analysis from BEC embraces large state building projects and does not directly reflect the performance of building projects of the private sector. We have not registered an increase of complaints to the Appeals Board of Construction (da. Byggeriets Ankenævn), therefore nothing indicates an increase of the amount of defects in private building projects” (Michael H. Nielsen, Dagbladenes Bureau, 2006).

¹⁰ The analyses can be found at: <http://www.byggeevaluering.dk/nyheder/rapporter.aspx>

With this statement, Dansk Byggeri charged the utilization of benchmarking as a socially constructive technology, as they did not recognize the data from the benchmarking system as a reliable knowledge foundation for conducting overall analyses of the construction industry. The exemplification of the misleading in BEC's results by presenting diverging data from the Appeals Board of Construction, Dansk Byggeri, thus challenged benchmarking as a socially constructive technology and the legitimacy of BEC as a messenger of an overall development of defects. The utilization of benchmarking for this purpose did, as intended, succeed in establishing political discussions about the development of defects, but benchmarking simultaneously faced a legitimacy issue, as actors in the construction industry interpreted the conclusions and opposed the results.

In June 2007 BEC once again published an analysis of the development of defects that showed a 22 times increase of defects in comparison with the previous year. The analysis was expanded by included several clients' interpretations of this high increase in defect. "Contractors' incompetency" was concluded to be the cause of the high amount of defects. Actors from the contractors' side responded by claiming that the causes were to be found in problems with sub-contractors, project changes during the construction work, and insufficient project material (Politiken, 2007).

By taking a position that highly reflected the claims of clients, Liliegreen engaged in a political debate that exceeded the statistical functions of BEC:

"There is an element of avoidance of responsibilities from contractors. But with the prevalent culture of construction you cannot expect that actors accept their responsibilities. But I would find it very refreshing if someone for once did so" (Curt Liliegreen, Politiken, 2007).

Thus BEC became politically engaged in a discussion about the liability arrangement regarding the many registered defects. By engaging in the interpretation of the results, BEC actively mobilized the figures from the benchmarking system in a political discussion, which induced strong opposing positions in the construction industry and unfolded Liliegreen's interest in promoting benchmarking as a socially constructive technology. The contractors came under further pressure as EBST put forward a critique of the construction industry based on the results from BEC. They did so by using the results to place a governmental criticism of the

number of defects in the construction industry and further to legitimize political interest in the governmental action plan, “Better and cheaper buildings” (Regeringen, 2007) (Jp.dk, 2007). In this case, EBST used the results from BEC as neutrally-produced, objective facts that could legitimate certain political ambitions and orientations for the construction industry by providing EBST a basis for making political decisions.

The release of and following responses to the report resulted in a united front consisting of BEC, clients, and EBST that constituted a general accusation of contractors and their responsibility of the massive increase of building defects. Accordingly, contractors were forced to react to the accusations in order to justify their position in the construction industry and respond to the critique. Once again Dansk Byggeri did not accept the premises for the conclusions and argued that the data from BEC did not reflect the development of the private market and did not correspond with the development of defects from the Appeals Board of Construction or from the Danish Building Defects Fund, which indicated a decrease of defects compared to 2005 (Jp.dk, 2007; Licitationen, 2007d). These counter-reactions from Dansk Byggeri reveal how the benchmarking system was not yet considered as an undisputed technology providing insight about the construction industry that could serve as a legitimate basis for political decisions.

Michael H. Nielsen from Dansk Byggeri had the following comment to Dansk Byggeri’s reaction to BEC’s analyses:

“We felt that they had been paying a high price for establishing and supporting BEC. Is this the thanks we get? To be displayed as incompetent? At some point, I think that there was a discussion in the board about how these conclusions are to be debated in the board before they are published. And as I am informed—I was not a board member at that time—Curt did not fully understand that. In his view it is a front page and a significant legitimization of BEC as central actor. And that is a misinterpretation in relation to the stakeholders. He should have kept the information internal instead of pursuing headlines” (Interview, Michael H. Nielsen).

Liliegreen’s ambition of providing the public general knowledge about the development in the construction industry accordingly entailed that BEC was not a neutral actor but instead attempted to be established as a platform from which political debates could originate.

“Liliegreen is an extremely talented analyst. He is very good in raising some issues very sharply. But it should not always be a goal to be in the media. The goal is to move an agenda, which I think he misread” (Interview, Michael H. Nielsen).

The reactions to BEC’s analyses reveal how benchmarking as a socially constructive technology and the political involvement of BEC in construction political discussions gave rise to reactions that attempted to undermine the ambitions of institutionalizing benchmarking as a reliable knowledge foundation for analyses about the construction industry.

4.5.3 CONSTRUCTING A BENCHMARKING SYSTEM FOR CONSULTING ENGINEERS AND ARCHITECTS

A consistent vision was that benchmarking was to be expanded so that it also included consulting engineers and architects. Besides the obvious effect of generating a higher degree of transparency of the market, this dissemination of benchmarking was considered essential for the continued acceptance from contractors:

“A requirement for contractors’ acceptance of the system was from the beginning the prospect of including consulting engineers and architects in benchmarking” (Interview, Liliegreen).

“In order to secure acceptance from the contractors it was necessary to keep emphasizing that consulting engineers and architects also would be included. It would not be politically acceptable for contractors if consulting engineers and architects were excepted” (Interview, Liliegreen).

The initial design of the system was affected by an underlying ambition of utilizing the data for the purpose of generating insight into the correlations between the information from the contractor system and those gathered from consulting engineers and architects in order to provide a data foundation that could be used for conducting detailed analyses of building projects. This objective reflected persistence in sustaining the benchmarking system as a socially constructive technology that could generate insight into the development of product performance on productivity, defects, customer satisfaction, time compliance and others. But likewise this objective reflected the interest in strengthening benchmarking in deriving

knowledge about the causal relations between these performance results and the more detailed process-related conditions and characteristics of the project.

“It was evident that we hoped that the system for consulting engineers and architects could be used to elaborate on the figures from the contractor system. My engagement in the development of the system was not driven by the ambition of benchmarking consulting engineers and architects, but more by an academic interest in learning something from benchmarking” (Interview, Liliegreen).

If these detailed causal relations were to be unfolded, it required that the system for consulting engineers and architects had to have correspondence to the system for contractors. Besides the obvious ambition of providing clients a tool for selecting consulting engineers and architects, the development of a system for consulting engineers and architects as well as this proposed orientation of the design reflected two underlying motives. Firstly, the inclusion of consulting engineers and architects broke with the hitherto one-sided focus on contractors’ performance. By including information of these actors in the benchmarking system, the responsibility of the product performance of the project was no longer exclusively placed on contractors but instead accounted for the more thorough analysis of the full range of participating actors in the project. Secondly, the correlation between the two systems secured some sort of fairness of the administrative burdens imposed on contractors, consulting engineers, architects and clients, respectively.

Since 2004 a development of a benchmarking system for consulting engineers and architects was a central activity in BEC. Realdania funded the development of the system with 2m kroner, and as for the system for contractors, this system was to be constructed in collaboration with representatives from the stakeholders. F.R.I. and Danske Ark appointed member companies to participate in the development, and representatives from the client side and contractor side were represented in the group responsible for the system as well. The Realdania funding facilitated a remuneration of the representatives from the construction industry for their involvement in developing the new benchmarking system. During the initial development of the system, BEC continuously communicated the progress through newsletters and on BEC’s annual meetings.

In 2007 the prospects of completing and implementing a system for consulting engineers and architects became evident for the construction companies, as the authorities explicitly expressed their support to include consulting engineers and architects in the executive orders:

“...Regarding KPIs for consulting engineers [and architects] EBST and the Ministry of Social Affairs will discuss the development of a benchmarking system with relevant parties from the consultants and the clients. This will take place during spring 2007.”

(Økonomi- og Erhvervsministeriet, 2007)

The system was developed with the aim of having a high degree of correspondence with the benchmarking system for contractors. The system for consulting engineers and architects was accordingly developed and approved by the board of directors in BEC before it was sent to review in EBST in 2007 before implementing it in the executive orders.

The proposed system was, however, not received well by consulting engineering and architectural companies nor was it by the board members in the professional associations, F.R.I. and Danske Ark. The two associations accordingly rejected the proposed benchmarking system and thus delegitimized several of the ambitions for this expansion of the benchmarking initiative.

But how could these associations reject a system that their own representatives had been participating in the development of? And what did their criticism concern?

Prior to the initiation of developing the system, the associations, BEC, and the representatives for consulting engineers and architects made an agreement that entailed that the representatives did not necessarily reflect the interests for Danske Ark and F.R.I. The reactions arose as the members of the associations were confronted with the proposed system. Although the two professional associations had accepted the proposal and were continuously informed, it ended up with a political struggle since consulting engineering companies and architectural companies forced the associations to attend to their critique.

In interviews with Curt Liliegreen, Henrik Garver (F.R.I.), and Christian Lerche (Danske Ark), they pointed to explanations for how the two professional associations apparently could be unaware of the content and political consequences of the benchmarking system that was developed: The board members and the member companies of the two associations had not

paid enough attention to the continuous reporting from BEC about the forming of the system. Also there was a lack of feedback from the work of their representatives in BEC to the board members in the associations and accordingly to their members.

In a mutual hearing statement, Danske Ark and F.R.I. elaborated on their rejection of the suggested system (hearing statement Danske Ark and F.R.I.¹¹). The two associations based their rejection on four areas of criticism which they considered to counteract what they found to be the cornerstones of benchmarking. Firstly, benchmarking had the purpose of promoting a competition that to a higher extent was driven by quality rather than price. Danske Ark and F.R.I. found that the suggested system had too much emphasis on information about the financial performance of consulting engineers and architects instead of information that reflected quality performance. This raised a concern of less innovative solutions since innovative solutions could end up influencing the price, thus the performance results, in the benchmarking system.

Secondly, the ambition for companies to use benchmarking as a tool for improvement was not fulfilled since the information could be several years old when they were presented to the companies. Information of that age would not be useful to the companies since it would be too late to navigate after the results.

Thirdly, in a value for money perspective, the organizations found that the lack of utilization of benchmarking for company improvement left little value for consulting engineers and architects when engaging in benchmarking. Further, clients' utilization of benchmarking as a way to enhance a competition on quality was questioned since benchmarking results would not replace anything but would function as a supplementary element in the prequalification. This entailed that F.R.I. and Danske Ark considered benchmarking to be yet another administrative burden when bidding on building projects. Accordingly, the two organizations pointed out the mismatch between the benefit for their members and the prospective costs of DKK 10,000 per evaluation and the number of administrative hours that were required in the suggested system.

Fourthly, the hearing statement addressed the "fairness" of the system. The suggested system entailed that foreign bidders were in a better competitive position since these were only requested to present references "comparable" to those of the benchmarking system. Foreign

¹¹ The hearing statement can be requested from BEC.

bidders could strategically select to enclose references on successful projects, whereas Danish bidders would have to present an average of their benchmarked building projects. Further, the two organizations argued that the measures in the suggested system that constituted the performance of consulting engineers and architects did not necessarily reflect whether the project had been successful or not.

The managing director of F.R.I., Lars Goldschmidt, emphasized that the attempts to construct a system that could correspond to the measures for contractors had resulted in a system that poorly reflected the criteria he found to characterize the performance of consulting engineers.

“A benchmarking system must fulfill four things: move competition from price to quality, be a tool for improvements, be just, and bring values that correspond with the cost it entails. When F.R.I. together with others recommend that this system is not to be put into operation and additionally have handed in one of the most critical hearing statements ever, it is because we do not consider the system to meet these requirements” (Lars Goldschmidt, Jyllands-Posten, 2007b).

Danske Ark legitimized the rejection of the system through a critique of the preliminary results from benchmarking contractors.

“Our association likes the idea of benchmarking and we have been supportive of the development of benchmarking. That being said, I am skeptical because I still lack to see the results of using the system. When I consider the system for contractors, I find these results doubtful.

We need to reconsider the system in order to achieve the right proportions between outcome and resource consumption. Benchmarking must be used to qualify companies, and as I see it, there are two areas where this is not working: on clients’ satisfaction and on work environment, where companies are using different systems” (Christian Lerche, Licitationen, 2007o).

With this statement, it was evident that Danske Ark had interests that deviated from those of BEC, EBST, and Bygherreforeningen. Danske Ark put forward an important political statement that reflected their interests in benchmarking and, simultaneously, a prognostic framing of

benchmarking that deviated from the one constructed about benchmarking as a normalizing governing technology.

The expectation of using benchmarking to qualify companies was a clear presentation of the prognostic framing of benchmarking as reflective development technology. This objective had been suppressed during the implementation of benchmarking so far, as BEC, EBST, and Bygherreforening were necessitated to construct a more coherent framing of benchmarking as a regulatory instrument to get private companies to conform to certain quality requirements through sanctions.

In his statement, Lerche further implicitly pointed to a contradictory element in the so far regulatory utilization of benchmarking. Benchmarking as normalizing governing technology could only find legitimacy through comprehensive use in the construction industry, but in order to disseminate the use of benchmarking, it must be cost-effective before it could be used widely in the construction industry.

4.5.4 THE CONSTRUCTION INDUSTRY REJECTS BENCHMARKING

In October 2007 the professional associations' discontent with the development of benchmarking reached a new height, as F.R.I., Danske Ark, Dansk Byggeri, ByggematerialeBranchen, and Tekniq, all represented in BEC's board, in a mutual announcement rejected the preliminary institutionalization of benchmarking. One major criticism concerned the proportions (Licitationen, 2007i), the bureaucracy, and the opaqueness of the benchmarking system, entailing that the system could not be used for the intended purposes (Licitationen, 2007f). In this way, the professional associations constructed a political delegitimization of the institutionalization by pointing out that the institutionalization of benchmarking as a normalizing governing technology did not include interests of the private market. The criticism was accordingly a reaction to a constructed motivational framing, which did not accommodate the original incentives from the private market to support the benchmarking initiative. The critique was severe:

“We have to start over and ensure that the construction industry is provided a reliable and useful tool and that the development is not to take place in BEC” (Mutual announcement from the five associations, Licitationen, 2007e).

This announcement was extremely powerful, as the joint forces of the large professional associations constituted a very strong platform to influence the institutionalization of benchmarking: If the members of these associations consequently deselected benchmarking in the future based on this prevailing discontent with the system, it would not only hinder the effects of benchmarking as a normalizing governing technology, it would entail such a strong delegitimization of benchmarking that the institutionalization would erode.

Despite these objections against the benchmarking system and the work of BEC, the associations still supported the vision of establishing a competition that was not reliant on price exclusively. The objections were, accordingly, not against benchmarking as a means to generate such effects but against the designed system:

“An evaluation instrument must work as intended. This is not the case with the existing system [for contractors] nor with the proposed system for consulting engineers and architects. This is why we request a new and more efficient system” (Jens Klarskov, Dansk Byggeri, Jyllands-Posten, 2007).

The same concern was raised by Danske Ark:

“The existing system for contractors has not been able to establish a foundation for competition on other criteria than price. When a similar system for consulting engineers and architects, which we can see is unsuccessful, is to be implemented, then it will not benefit us either” (Christian Lerche, Licitationen, 2007i).

These two statements reflect how the organizations attempted to delegitimize the existing prognostic framings of benchmarking by pointing out that they were insufficient in addressing the diagnostic framings as intended. By doing so, the associations simultaneously prepared the ground for a future motivational framing that could embrace all stakeholders: A less comprehensive system, that was transparent for the companies, could be used as an accurate selection tool by clients and, finally, was more applicable for utilizing benchmarking as a management tool internally in the private companies.

“Contractors want to be assessed. But it is necessary to adjust the system in order to provide value for clients and to make benchmarking work as an internal management tool for the companies” (Flemming Preisler, Tekniq, Licitationen, 2007j).

In this way, Preisler reintroduced the objective of utilizing benchmarking as a reflective development technology, which had been neglected so far in favor of generating a more coherent understanding of benchmarking as a normalizing governing technology. The accommodation to this prognostic framing was accordingly considered to be a prerequisite in order to construct a motivational framing that could be supported by the private market.

The same intertwining of these two prognostic framings of benchmarking was revealed by Dansk Byggeri:

“It is important to underscore that the existing system is not good enough. None of my 6,500 members find it useful. It is exclusively a cost and an administrative burden for them. This is why we want a tool which clients, contractors, consulting engineers and architects can use in both the prequalification and during the execution of the project. Such a tool would secure that everyone in the construction industry has the possibility to learn from the evaluation process during the process and not several years later. Meanwhile we must consider the efforts that companies already are investing in evaluation systems” (Jens Klarskov, Licitationen, 2007g),

Tekniq further actively delegitimized the existing prognostic framings of benchmarking, as the managing director pointed out the inexpediciencies of one of the premises for institutionalizing benchmarking—a dissemination of benchmarking to the private sector:

“The benchmarking system is insufficient, also when it comes to transparency and dissemination. The state is not the largest client and this entails that transparency and dissemination is not accelerating at a pace that makes it attractive to use KPIs. Accordingly, it is neither a competitive parameter nor an attractive internal management tool” (Flemming Preisler, Licitationen, 2007j).

The five professional associations were clear in their requirements for developing a new benchmarking system: BEC was not to participate, and EBST was requested to sit at the end of the table during the discussions (Licitationen, 2007g; Licitationen, 2007h; Licitationen, 2007i; Licitationen, 2007j).

The accusations against BEC entailed that Realdania and Bygherreforening felt it necessary to state that clients needed a selection tool and that, as long as the executive orders existed, BEC

would persist. However, both actors agreed on a modification of the existing system (Licitationen, 2007h).

“State clients cannot go without a benchmarking system. But the existing system is too ambitious and too opaque. We need a system which all parties in the construction industry partake in” (Knud Erik Busk, Bygherreforeningen, Licitationen, 2007h).

The mobilized forces against the prognostic framing of benchmarking constructed by BEC, Bygherreforeningen, and EBST threatened the platform from which benchmarking previously had found its legitimacy and political orientation during its preliminary institutionalization. Construction companies forced the five associations to achieve influence on the development and forming of benchmarking in order to reconfigure the framings in ways that sufficiently considered the interests of contractors, consulting engineers, and architects.

The successful destabilization of benchmarking was a clear demonstration of the political power private companies in the construction industry were able to mobilize through their professional associations. The five associations constituted a plausible threat for a boycott of BEC and for a continuing rejection of benchmarking as a legitimate prescriptive and obligatory part of the construction industry. In order to achieve a continued institutionalization of benchmarking, it was necessary to construct alternative prognostic framings that could gain support from the powerful private actors.

4.6 RE-ORIENTATING THE INSTITUTIONALIZATION

The previous chapter demonstrated how the institutionalization of benchmarking was being challenge and transformed as actors with different political interests interpreted the rising institution and caused political struggles about the further orientation of benchmarking.

In this chapter it will be revealed how the institutionalization of benchmarking was modified as a consequence of the political struggles that were raised from the five professional associations and their member companies.

The political pressure resulted in a replacement of the management in BEC and prompted that BEC was to transform towards less political involvement in the future and more market-orientation in their communicating and dissemination of benchmarking. Additionally, the benchmarking system was simplified at the expense of the prognostic framing of benchmarking as a socially constructive technology from which analyses of societal interests could be derived in favor of a more operational and accepted system among practitioners. Accordingly, a new motivational framing that, to a larger extent, embraced all stakeholders was constructed. Benchmarking was accordingly politically negotiated in ways that were acceptable for the whole range of professional association and the authorities, and the politically negotiated benchmarking institution was stabilized around the perception of benchmarking as a normalizing governing technology, relying on a normative interpretation among construction companies that the track records were used by clients in their selection of collaborators in the prequalification.

It will be demonstrated how the simplification of the benchmarking system combined with a increasing request for KPIs in prequalifications opened for other actors to engage in the benchmarking activities and resulted in the establishment of two new benchmarking operators¹². These two benchmarking operators promoted benchmarking differently than BEC, and as a consequence, multiple interpretations of benchmarking's instrumental purposes and overall objectives became present, as the benchmarking operators made use of different communication strategies to construct motivational framings that could gain support from the practitioners in the construction industry. This entailed implications of disseminating

¹² A third benchmarking operator, "Funch Rådgivende Ingeniører Aps", also entered the market. However, the company withdrew from the market after a short time.

benchmarking as a coherent development initiative for the construction industry with uniform instrumental purposes and overall objectives. As a result of the presence of three benchmarking operators with different interests in and perceptions of benchmarking, private construction companies assumed a decisive role in the institutionalization of benchmarking since their choice of benchmarking operator automatically would reflect which motivational framing they found to be most appealing and in their interest.

4.6.1 LEGITIMIZING BENCHMARKING THROUGH A REORGANIZATION OF BEC

As demonstrated in the previous chapter, the rejection of the benchmarking system for contractors and the suggested benchmarking system for consulting engineers and architects was a clear demonstration of a general lack of acceptance of the prognostic framings of benchmarking that was propounded by BEC, the authorities, and Bygherreforeningen to that point. The mobilization of the five politically motivated actors resulted in a massive political pressure to accommodate the requirements from the private market. But despite the strong opposition of BEC, the professional associations maintained a mutual support for the centre as guarantor for conducting impartial and independent benchmarking activities (Licitationen, 2007q)—but not unconditional. The high degree of political influence that BEC had had in the institutionalization until now was highly threatened due to disagreements among the board members concerning the future motivational framing, including the areas of responsibilities that the BEC was to attend to.

Due to BEC's political engagement in the construction political debates, benchmarking had become a political issue and messenger of politically sensitive conclusions on the construction industry that was not gaining unanimous support from the board of directors. BEC had successfully established a strong identity in the political debate but simultaneously made the centre a target for political struggles. The strong interplay between EBST, the Ministry of Social Affairs, and BEC also entailed a general perception of BEC as a carrier of governmental regulative interests more than as a representative of the construction industry's interests. The development had constituted a contradictory aspect of BEC as both provider of analyses of societal interests and as neutral, impartial actor in the construction industry.

Another main reason why the professional associations had successfully destabilized the prognostic framings of benchmarking as a normalizing governing technology was due to the documented lack of demands for KPIs from clients and the missing widespread utilization of KPIs in their prequalification of bidders. In this way, the destabilization of the preconditions for the prognostic framing of benchmarking as providing transparency and a selection tool for clients provided openings for these opposing actors to gain influence in the institutionalization of benchmarking.

The political influence of BEC had until now been a necessity in providing a platform for the institutionalization of benchmarking that partly provided the centre sufficient legitimacy for developing a benchmarking system that was accepted by stakeholders and partly provided the centre the authority to enforce the system through executive orders from the authorities. This platform and regulatory legitimacy of BEC were provided by the very same associations that now were pressured by their members to restructure the political power that influenced the institutionalization of benchmarking. The conflicting interests among board members in BEC contributed to a destabilization of BEC as a legitimate producer and carrier of the institutionalization of benchmarking.

A restabilization of benchmarking called for a re-orientation of benchmarking where BEC was deprived of some of the political influence that the centre had had so far in order for the associations to gain more influence in the future institutionalization of benchmarking. The harsh criticism raised by the five associations called for a high degree of compliance to the areas of criticism in order to regain a broad support from the professional associations and their member companies. In other words, for benchmarking to be successfully institutionalized, it was necessary that benchmarking achieved a renewed credibility from the stakeholders.

The controversies thus contributed to an incorporation of several political interests and compromises in the future institutionalization of benchmarking. With the increased political focus on benchmarking, an immediate effect was derived: The respective managing directors of F.R.I. and Danske Ark replaced their nominated representatives from private companies as board members (Licitationen, 2007k) in order to represent their members' political interest in benchmarking. This purely political constellation of the board reflected a political signal from the professional associations of controlling and managing the decisions that were made in the centre in respect to their political interests.

With a prospect of political negotiations being made, the board members revealed interests from which the compromises were to be made:

“Companies find the benchmarking system expensive, difficult and not providing any useful feedback” (Jens Klarskov, Dansk Byggeri, Børsen, 2007).

“Companies are using many resources on the system and simultaneously clients do not make use of them” (Niels Jørgen Hansen, Tekniq, Børsen, 2007).

As part of the discussions, other actors tried to promote the benchmarking initiative as a legitimate institution in the construction industry. BEC contributed to the legitimization of benchmarking by getting a number of large and experienced clients to unambiguously approve benchmarking as a part of their prequalification (Licitationen, 2007p). This politically motivated initiative reflected that the support of clients was considered to be of outmost importance for legitimizing the future existence of benchmarking

Realdania also publicly expressed their support to benchmarking, and EBST showed a great willingness to accommodate the critique from the private actors and develop a new benchmarking system (Licitationen, 2007l). One demand was, on the other hand, insisted on: The data from the existing system had to be reused in case of a new system in order to secure that the gathered information was not wasted (Licitationen, 2007l). EBST, who was expected to be in charge of the political negotiations, sought to hang on to statements that supported a future institutionalization of benchmarking:

“EBST is satisfied about the fact that no one expresses discontent with benchmarking in general. What is important is that we simplify the system, so that it is quick, easy and inexpensive and does not cost companies much trouble” (Finn Lauritzen, director of EBST, Licitationen, 2007l).

These political statements and support for the benchmarking initiative reflected how these actors still insisted on a continuing institutionalization of benchmarking but also were willing to produce the modifications that were necessary in order to gain support from the opposing actors. The statement from Finn Lauritzen can be regarded as EBST’s attempt to construct an accommodating political platform for the future political struggles and negotiations between the different actors, with EBST as mediator. In this way, EBST was expressing a willingness to modify the prognostic framings of benchmarking in order to sustain a main objective of changing the competition in the construction industry, securing that the future competition in construction could be based on a higher degree of quality. Now the political challenge was to rescue BEC from abolishment by embarking on a new course that was acceptable for the companies in the construction industry. It was, accordingly, a question of reformulating BEC from being free and independent of interests in the construction industry to instead attend to the interests of private compromises and on constructing settlements that could find political resonance among the stakeholders.

4.6.2 REORGANIZING THE MANAGEMENT IN BEC

The ambitions of Liliengreen showed to be incompatible with the interests that had been raised by the professional associations and construction companies. In October 2007 Curt Liliengreen left his position as managing director of BEC in a mutual agreement between him and the board of directors (Jyllands-Posten, 2007a). The press claimed the reason to be the massive critique that had been raised by the professional associations towards the two benchmarking systems developed with BEC as main coordinator and the public releases of the critical reports about the development of defects in construction (Jyllands-Posten, 2007a; Licitationen, 2007m).

Gaining support for BEC from the professional associations and maintaining the centre as a legitimate benchmarking operator required a transformation of the center's role into a more neutral position that did not act independently in future political discussions but found its legitimacy through a function as a reliable neutral operator of benchmarking representing the board members' interests in benchmarking.

With the removal of Liliengreen as managing director it was possible for the board of directors to inscribe BEC in a position where the managing director was not as politically intertwined in the discussions about the orientation of the institutionalization. This made it easier for the board to construct a new motivational framing for the stakeholders by transforming the prevalent prognostic framings of benchmarking. This transformation would accordingly reflect a compromise between the stakeholders and simultaneously symbolize BEC in a renewed version that to a higher extent focused on the administrative tasks of operating the benchmarking system and conducting analyses than a strong political actor in the institutionalization.

Liliengreen's replacement was found in BEC, as the board of directors appointed the, at the time, deputy director, Ebbe Lind Kristensen, as the new managing director of the centre. Deputy director, Peter Hesdorf, was additionally entitled "director." The two directors were put in charge of transforming BEC into a trimmed and less bureaucratic company (Jyllands-Posten, 2007a). The main focus areas were a) to make benchmarking operational; b) to stimulate a demand for benchmarking from the clients; c) to gain acceptance from the construction companies; and d) to balance the economy in the operation of the benchmark system. One year after his nomination, Kristensen resigned as managing director in favor of a job in a consulting engineering company. The board appointed Hesdorf the new managing director.

In an account for the point of departure that the transformation of the centre was to depart, Peter Hesdorf explained:

“I find the lacking demand for KPIs to be an important aspect in the history of BEC. This was caused by the fact that nobody had told clients how they should use the KPIs” (Interview, Peter Hesdorf).

“BEC’s task was to produce KPIs. It was not given that we also were responsible for explaining clients how they should use them. This responsibility could just as well have been the authorities’ or other actors” (Interview, Peter Hesdorf).

“When you deal with sensitive processes in construction like prequalification of collaborators, it is very easy to do something that breaches with the legal requirements for clients. This made it difficult for clients to use KPIs. At least it was easier not to, in order to be certain that they did not do anything wrong. This entailed that the system got off to a bad start. And over time this also entailed that several clients got the perception that the system was difficult and time-consuming” (Interview, Peter Hesdorf).

“Until now we had been addressing many areas. We had many interests, and benchmarking was only one of them. [...] It was downhill when Ebbe and I took over the centre in 2007. And it became even worse when our costumers thought that the centre was about to close down. [...] Accordingly, we chose to focus on what was important: the functioning of the benchmarking system” (Interview, Peter Hesdorf).

These quotations reveal the challenges that were considered most important to address in order to establish a stable platform for the future institutionalization. These challenges accordingly reflected an increased focus on pursuing a motivational framing that could be mutually agreed upon among stakeholders: changing the competition from price to quality. This mutually accepted motivational framing was revealed by the director of EBST:

“It was my task to gather the stakeholders and identify the things we could agree upon: to change the competition in the construction industry towards quality instead of price. On this basis we made a deal about the system for consulting engineers and architects and the system for contractors. We agree that we need to lower the ambitions for both systems” (Finn Lauritzen, Licitationen, 2008a).

This strong focus on a coherent motivational framing was further revealed as Peter Hesdorf explained:

“The main task for BEC is to generate transparency in the construction industry. This is definitive and it is a part of our articles of association. This is supported broadly in the construction industry. It is in the interests of clients to select the best bidders for their projects. And it is in the interests of the private companies that competition is on other criteria than price exclusively” (Interview, Peter Hesdorf).

BEC found it to be a prerequisite for the future acceptance of benchmarking as a legitimate part of the construction industry that clients, to a higher degree, actively made use of benchmarking in the prequalification. Accordingly, BEC invested many resources in the coming years in communicating benchmarking to clients that was not subjected to the executive orders. BEC’s attempts to institutionalize benchmarking had a heavy basis in the centre’s ambition of producing transparency in the construction industry, which was not to be isolated to the domains of state and social housing building activities. BEC’s ambitions of transparency included a strategy of actively disseminating benchmarking to the private market and also the regional, and local authorities that was not subjected to the executive orders. This ambition was a break with the strategy that had been highly criticized by the construction companies that relied on a dissemination of benchmarking as a legal requirement.

“We believe that in order for the benchmarking system to be successful it must cover the entire construction industry” (Interview, Peter Hesdorf).

“We decided to focus on getting clients to use benchmarking. We did so in order to generate a demand for KPIs. Nobody will be interested in achieving KPIs if no one requests them” (Interview, Peter Hesdorf).

With the purpose of disseminating benchmarking, BEC carried out a project in 2009 that aimed at getting clients from the 98 local authorities to demand track records from their bidders (Licitationen, 2009). The project was called “Local authorities as front-runners.”

“It is free of charge for a client in local authorities to demand track records, and we encourage them to do so. We will also ask the clients to demand that benchmarking is

conducted in one or more of their building projects, which will increase our amount of data for the benefit of other clients” (Peter Hesdorf, Licitationen, 2009).

“The purpose of the project is to disseminate the utilization of track records to local authorities. Additionally, we wish to know about the barriers that prevent local authorities from using the system.” (Peter Hesdorf, Licitationen, 2009a).

The ambitions of disseminating benchmarking to clients, who were not subjected to the executive orders, necessitated a communication strategy that could reveal clients’ potential benefits from utilizing benchmarking in their prequalifications. BEC accordingly promoted benchmarking as a normalizing governing technology to the local authorities through exemplifications:

“It is natural that the employer asks for the candidate’s diploma. It is almost considered to be a poor management style not to if the company has advertised for a high position. For the same purpose, we want to show clients [from the local authorities] that they can request track records from their bidders, and we offer this service free of charge” (Peter Hesdorf, Licitationen, 2009b).

BEC’s expectation of the normalizing effects of benchmarking was also expressed in the same newspaper article:

“Additionally, clients can use the benchmarking system to demand KPIs from their building projects. This entails that the contractor, consulting engineer or architects know that they are being assessed on their performance, which provides them an incentive to provide a good service” (Peter Hesdorf, Licitationen, 2009b).

In this way, BEC continued to disseminate benchmarking as a normalizing governing technology, in a communication strategy that to higher degree revealed the benefits that benchmarking could entail when used in clients’ prequalification.

4.6.3 TRANSFORMATIONS OF THE BENCHMARKING SYSTEMS

The political struggles described in the previous chapter entailed a strong request for simplifications of the two benchmarking systems. The compromise that was made regarding the benchmarking system for consulting engineers and architects was made with EBST as

mediator and with actors representing the consulting engineers and architects. Further, a consultant was hired to mediate between the parties. The result of this negotiation was a much less administrative-requiring system that best can be described as an evaluation of the customer satisfaction (Erhvervsbladet.dk, 2007). The system consisted of basic data about the building project and 15 subjective questions regarding the consulting engineer's or architect's performance during the project. The specific questions can be seen in appendix C (Note that BEC uses the term "consultant" as a common term for consulting engineers and architects).

"The system consists entirely of subjective KPIs. The assessment is made by the customer and the procedure takes a maximum of ten minutes" (Appendix C).

This statement reflects that the main concern about a too comprehensive system that did not provide the consulting engineers or architects with sufficient value was accommodated. The track records were maintained in order to sustain clients' use of benchmarking in the prequalification. But the compromise entailed a downgrading of the original ambition of intertwining the benchmarking system for consulting engineers and architects to the system for contractors. This reflected an exploitation of the contradiction between the previous ambitions for benchmarking and the requirements for a future institutionalization. The ambition of having a high degree of intertwining between the two systems required a much heavier administrative burden and was thus contradictory to the ambition of having a system that was accepted by consulting engineers and architects due to its low resource consumption. A consequence was that the utilization of benchmarking as a socially constructive technology was given a lower priority (as this required maximum information about project characteristics and a high degree of intertwining between the two systems) in favor of a stronger support and acceptance from the companies subjected to benchmarking. Additionally, the simplification of the system for consulting engineers and architects entailed that the transparency was reduced to questions related to customer satisfaction.

The reduced transparency and the de-legitimization of benchmarking as a socially constructive technology was further strengthened as the benchmarking system for contractors concurrently faced major modifications in order to meet the requirements put forward by contractors and their associations. The political negotiations resulted in a heavy reduction of 60% of the information that was required through the executive orders (Licitationen, 2007n).

The modifications of the system entailed that BEC could conduct the benchmarking activities for contractors without gathering information from their subcontractors and had four concrete outcomes that reflected the political considerations that were favored in the negotiations:

- The information from already benchmarked projects could still be used.
- Information from subcontractors was cut out.
- Information about the company's expenses was cut out.
- KPI about work environment was changed from "accidents per million work hours" to "accidents per billion DKK." (BEC, 2007)

"The simplification has no consequences for clients who wish to use KPIs and track records in a prequalification of contractors. This is free of charge and the amount of KPIs are the same as until now [...] BEC is content with the solution that has restored the order of the benchmarking system and the track records" (Ebbe Lind Kristensen, BEC, 2007).

The simplification of the contractor system accordingly reflected a maintenance of utilizing benchmarking as a normalizing governing technology, as the simplification was considered not to compromise clients' utilization of benchmarking in their prequalification of contractors.

The simplification entailed that all registrations from subcontractors were taken out of the system and simultaneously that KPIs about productivity were no longer a part of the system. Another result of the simplification was that all registrations were now to be conducted by clients instead of both clients and contractors as done so far. In this way, the reporting burden was considerably reduced for construction companies.

The prevalent expectations to how benchmarking could increase productivity in the construction industry were now based solely on the prognostic framing of benchmarking as a normalizing governing technology that provided clients with transparency of bidders performance and through sanctions provided incentives for companies to adjust their products and processes.

How could such previously important ambitions for benchmarking be taken out? The answer was to be found in the more market-oriented approach of BEC:

“One of the original objectives with the system was to produce measures of productivity. This discussion about the productivity in the construction industry is ongoing and therefore there was a request for some concrete and valid figures about productivity. But this was cut in the simplification of the system. It was a matter of give-and-take at that time. I just find it worth mentioning that measuring productivity was acknowledged, but the output did not commensurate with the efforts ” (Interview, Peter Hesdorf).

“The development of the benchmarking systems is a consequence of taking actors’ different interests into account. We in BEC wish to provide a system that generates the transparency needed in the construction industry. The transparency is not a reflection of BEC’s or my personal interpretation of transparency” (Interview, Peter Hesdorf).

These statements reveal the new position and focus of BEC as an actor that had ambitions of acting neutral and operating a benchmarking system that reflected mutually agreed interests of stakeholders. Accordingly, the statements reveal how BEC withdrew from political discussions that had previously been main interests to the centre in favor of meeting the expectations to a centre that operated on the basis of a more market-oriented strategy. Particularly, BEC’s approach to generating transparency on the premises of the construction industry reflected a high degree of deviation from the high ambitions of former managing director, Curt Liliegreen, who sought to generate a maximum of transparency for the purpose of utilizing benchmarking as a socially constructive technology.

The simplification entailed that the KPIs about efficiency and productivity no longer were part of the system. This was originally one of the cornerstones in benchmarking: to address and shed light on the fundamental problem of the construction industry—low productivity, which required measurements of productivity. The exclusion of the efficiency and productivity measures must be regarded as a result of opposing actors’ capability to propound powerful counter-arguments demonstrating the inexpediencies of the efficiency and productivity measures in a cost-benefit consideration (e.g., Interview, Jesper Rasmussen; Karsten Gullach). Accordingly, the exclusion of the measures was a necessary sacrifice in the political negotiations of providing renewed credibility to the institutionalization of benchmarking. The exclusion of the efficiency and productivity measures simultaneously reflected the political requirements for a less politically influential role of BEC, as BEC no longer would be able to

use benchmarking for producing analyses of societal interest of the productivity development of the construction industry. The main focus on benchmarking was how to make the system operational and integrated into the industry.

With this new strategic focus of BEC, the previous legitimization of benchmarking as a legal requirement was no longer part of BEC's dissemination strategy. Accordingly, it was required that the authorities expressed their support for this regulatory dissemination of benchmarking in order to maintain BEC as a neutral benchmarking operator, separated from the legal requirements. In a press release (Licitationen, 2007n), the authorities accounted for a strong political support to a continued institutionalization of benchmarking as an important provider of transparency and as a means to change the competition from price towards quality. The press release announced that the Minister of Trade and Industry would participate in BEC's coming annual meeting and make clear that benchmarking would continue to be a central part of the future construction policy and, further, that the amount of defects was a political focus area in the ambition of providing better and less expensive buildings (Mester Tidende, 2008; Licitationen, 2008b; Licitationen, 2008c).

“We are very content with the participation of the minister at our annual meeting. We perceive it as a vote of confidence and a support to the centre and the associations responsible for the new system to contractors and the new system to consulting engineers and architects” (Ebbe Lind Kristensen, Licitationen, 2007n).

The strategy of the annual meeting seemed distinct: The two new benchmarking systems were to be presented, and benchmarking had to be communicated in a way that was more attractive to those subjected to benchmarking: contractors, consulting engineers, and architects. The contents of the annual meeting reflected an unfolding of BEC's new role, where the traditional focus on the development of defects and productivity was deselected for the benefit of putting the two benchmarking systems in the spotlight and communicating the practical functioning and legitimacy of benchmarking the construction industry. Simultaneously, the authorities revealed a strong interest in benchmarking and further made clear that they were responsible for regulative requirements to benchmarking. This responsibility was exemplified, as the director of EBST, Finn Lauritzen, became the vice chairman of the board in BEC (Licitationen, 2008), and thus reflecting to a higher extend than previously that the political issues of benchmarking that had a base in the content of the executive orders was a matter for EBST and

the Ministry of Social Affairs rather than for BEC. In this way, the authorities removed some of the pressure that had previously been put on BEC as carrier of the legislations.

4.6.4 COMPETITION – BÜLOW MANAGEMENT

In 2010, shortly after announcing that the 1000th contractor company had enrolled in the benchmarking system and that BEC was continuing work on communicating and disseminating benchmarking as a simple and attractive initiative for the market to partake in (BEC, 2010a), a new actor emerged.

A competitor to BEC was presented in a newspaper article (Børsen, 2010). The story was presented as a pleasant piece of news for proponents of Liberalism and market economy, as BEC was perceived as having a monopoly on conducting benchmarking and criticized for inflated prices (Børsen, 2010).

The new benchmarking operator was a consulting company called Bülow Management that already had activities within the construction industry and collaborated with Dansk Byggeri in network groups called “Business Excellence Network” addressing management and organizational development in construction.

Through these groups Bülow became acquainted with the benchmarking initiative and was presented to some of the critique areas contractors had with the system. Bülow introduced a concept called “The Index for KPIs and Clients in Construction” (da. Byggeriets Nøgletals- og Kundeindeks, BNKI), which were based on the same KPIs as in the executive orders and provided companies the KPIs for bidding on projects where track records were required. BNKI additionally supplemented the track records with analyses of the data. The concept was developed in collaboration with six contractor companies (Appendix D – in Danish).

“The idea behind BNKI is to incorporate a more customer oriented approach in the construction industry and hereby an increased possibility for companies to compete on quality rather than price. Our entrance to the market [of benchmarking operators] generates an interesting situation on a market that has until now not had any competition. We expect that we in the future will see more benchmarking operators, which will only improve the market further” (Troels Støvring, Bülow Management, Børsen, 2010).

BEC and Dansk Byggeri responded positively to the prospect of competition:

“We welcome Bülow and see positively on competition. It is only good when the companies have more options” (Peter Hesdorf, BEC, Børsen, 2010).

“We are proponents of the market and welcome the new initiative. But of course on the premise that Bülow meets the demands from the government” (Michael H. Nielsen, Dansk Byggeri, Børsen, 2010).

Simultaneously, Michael H. Nielsen from Dansk Byggeri reflected on the insufficiencies and weaknesses of BEC and presented an underlying expectation to the future marketing of benchmarking that Bülow Management was likely to find legitimacy and support from:

“BEC was probably too ambitious from the beginning with too comprehensive and detailed benchmarking. This is better now [after the simplification of the system]” (Michael H. Nielsen, Dansk Byggeri, Børsen, 2010).

The development of the institutionalization had generated openings for entrances of new benchmarking operators: the simplification of the benchmarking system had generated a more economically lucrative market for others to conduct and benefit from benchmarking due to the reduced work in conducting benchmarking, a greater demand for KPIs from clients was recorded, and a considerable rise in the number of social housing projects resulted in prospects of future increased requirements for benchmarking. The results of political negotiations (that emerged through an exploitation of the contradictions between having a comprehensive system that provided socially constructive analyses and having a benchmarking system with an administrative burden that could be accepted by the private market) entailed an opening for new actors to enter the market of benchmarking operators. This opening was also provided, as the authorities had taken over the responsibility for the regulatory dissemination of benchmarking. Accordingly, this new distribution of roles in the institutionalization of benchmarking made it possible for new benchmarking operators to formulate benchmarking in prognostic framings that fulfilled the legal requirements of the executive orders but did not necessarily subscribe to the same motivational framing as BEC. In this way, the benchmarking operators were able to construct their own interpretations and sale strategies of how benchmarking could gain the highest support as a normalizing governing technology among the construction companies purchasing benchmarking products and services.

These exploitations of benchmarking operators' possibility to construct new motivational framings became evident with the entrance of Bülow Management. The benchmarking operator reformulated the motivational framing for engaging in benchmarking (as normalizing governing technology) by designing products and services that, to a greater degree, reflected a focus on the construction companies instead of the clients.

Bülow Management was encouraged to attend to this focus by Dansk Byggeri and their member companies:

“He [Michael H. Nielsen] thinks that many construction companies have been skeptical towards the BEC. High prices, lacking effects and too much bureaucracy have been areas of criticism” (Børsen, 2010).

This was further followed up in an interview with a contractor in the same newspaper article:

“The monopoly has possibly pervaded the behavior of BEC. Director Peder Buus from Buus Totalbyg in Bjerringbro is at any rate not satisfied with the attitude [of BEC], and has therefore chosen BNKI [as benchmarking operator].

‘We have not been in agreement of how to run things. They [BEC] have acted as if they were the only ones who had had a saying. Additionally they have been arrogant in the way they approach companies through the letters they have been sending’” (Peder Buus, Buus Totalbyg, Børsen, 2010).

This newspaper article reveals how Bülow Management was able to exploit the dissatisfaction with BEC by propounding alternative prognostic framings of benchmarking for the companies in the construction industry which were expected to be more appealing to these actors.

Bülow Management's exploitation of these dissatisfactions appeared during the interview with Troels Støvring (Bülow Management), who revealed an exploitation of two main contradictions in the institutionalization of benchmarking, providing a legitimate platform from which Bülow Management could engage in benchmarking and develop BNKI:

Støvring explained how the dissemination of benchmarking was being hindered by the prices of BEC:

“[T]he price for benchmarking was too high, and the market needed a different price structure for benchmarking” (Interview, Troels Støvring).

With this critique, Bülow drew on an already criticized contradiction in the benchmarking institutions, pointing to a lack of correspondence between of the resources and prices for benchmarking and the output that was provided the companies that were purchasing the benchmarking products and services. This entailed that, when BNKI was introduced, it was along with a price structure that was lower than the one of BEC. The new fees ranged from 7,000 DKK for a contract less than 15m DKK, 9,000 DKK for a contract on more than 15m DKK, and a fixed price at 4,000 DKK for benchmarking for consulting engineers and architects (Appendix D). This new competition on price for conducting benchmarking soon set a precedent of prices for benchmarking, as BEC also adjusted their prices in this same period.

The second contradiction exploited by Bülow Management was based on the dissatisfaction with benchmarking among some contractors, consulting engineers, and architects. Bülow Management attempted to disseminate benchmarking to these actors in ways that would reflect more local and market competitive advantages that could be derived from benchmarking. The aim was to generate new perceptions and utilizations of benchmarking among construction companies, which enabled them to bid on building projects where track records were required and simultaneously could benefit these companies by deriving improvements of their products and services. This strategy was considered to have potential, as Bülow Management had already identified interests and openings for such managerial utilization of benchmarking.

“Several of the big companies had an internal evaluation culture, which the BNKI concept fitted into. The companies have in several years worked with customer satisfaction on the individual projects. BNKI offered an opportunity to continue this work and streamline it across the organization” (Interview, Troels Støvring).

“And this was how we entered the market: to develop the system on the premises of contractors, consulting engineers, and architects” (Interview, Troels Støvring).

Bülow Management’s point of origin to their constructing of a motivational framing appealing to construction companies is revealed in the below statements:

“Incentives to increase quality are generated when a contractor needs to focus on KPIs, because he knows that in the end he will be assessed on these. In this way the system is a method to increase quality of the buildings and that price is not the only quality in the prequalification. This objective is very noble, and the system has been based on this purpose so far. But how do you meet this purpose?” (Interview, Troels Støvring)

“This system has two values. The first value is that you are able to bid on building projects, where KPIs are requested. The second value is the opportunity for companies to identify areas of improvement, which can help in an optimization of your company. Since we are a consulting company, you are probably not surprised that we are focusing on the latter value” (Interview, Troels Støvring).

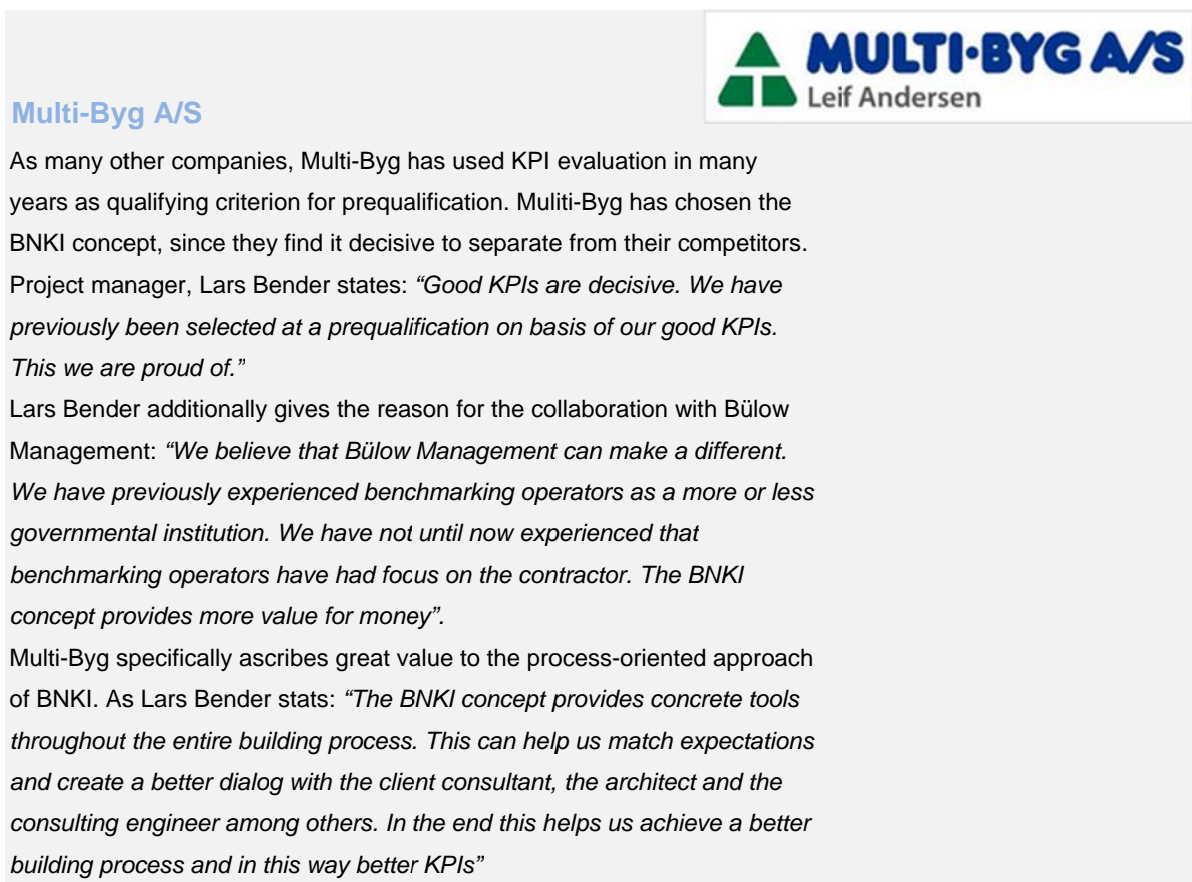
“The contractors, consulting engineers, and architects felt that their interests were neglected in the system. The system was a system between the benchmarking operator and the clients. This left a major group of people in the middle who were being measured and simultaneously were paying for the system. So our focus was to bring these people into focus and tell them how they could benefit from the system...We needed to tell them about the importance of a good track record and how they could achieve such. We needed to show them how benchmarking could be used as a competitive resource and resource for marketing” (Interview, Troels Støvring).

BNKI was accordingly developed as two products: one product that consisted of a track record, in order to satisfy the executive orders and to bid on building projects where KPIs were required, and the second product was more of a consultancy service, where recommendations were given based on the achieved and historical KPIs and supplementing information that Bülow Management gathered from involved actors.

“We cannot give recommendations based on qualitative data exclusively. We need qualitative data in order to understand the quantitative data. Otherwise we risk recommending something wrong...Our focus is on the internal utilization of the KPIs: What can companies use benchmarking for?...This is about why the client says what he says. What are the reasons to say as he does? What can the company learn from this? What can the company do different next time? This is what the BNKI report does. It

helps creating a customer focus and helps extracting knowledge from the KPIs, which helps companies using benchmarking proactively” (Interview, Troels Støvring).

On their website, the marketing strategy of Bülow Management was very apparent, as several of their customers presented their perception of BNKI and motives for choosing BNKI as their benchmarking operator:



Multi-Byg A/S

As many other companies, Multi-Byg has used KPI evaluation in many years as qualifying criterion for prequalification. Multi-Byg has chosen the BNKI concept, since they find it decisive to separate from their competitors. Project manager, Lars Bender states: *“Good KPIs are decisive. We have previously been selected at a prequalification on basis of our good KPIs. This we are proud of.”*

Lars Bender additionally gives the reason for the collaboration with Bülow Management: *“We believe that Bülow Management can make a different. We have previously experienced benchmarking operators as a more or less governmental institution. We have not until now experienced that benchmarking operators have had focus on the contractor. The BNKI concept provides more value for money”.*

Multi-Byg specifically ascribes great value to the process-oriented approach of BNKI. As Lars Bender states: *“The BNKI concept provides concrete tools throughout the entire building process. This can help us match expectations and create a better dialog with the client consultant, the architect and the consulting engineer among others. In the end this helps us achieve a better building process and in this way better KPIs”*

Figure 4: Case example from BNKI’s website¹³ (Own translation)

The case example (and others examples from their website) reveals how Bülow was attracting construction companies that were interested in attaining good KPIs for future prequalifications and simultaneously gaining insight into how to achieve such. In this way, the prognostic framings of benchmarking as a normalizing governing technology seemed to be intertwined with an interpretation of benchmarking as a reflective development technology. By promoting KPIs as a unique insight into clients’ assessment of their collaborators’ performance, the aim

¹³ <http://www.bnki.dk/cases/read/12> accessed 12-10-2012

was to motivate contractors, consulting engineers, and architects to value benchmarking as a productive element in improving their performance. In this way, Bülow Management attempted to construct a prognostic framing that exploited the contradictions of the institutionalization of benchmarking. However, the reflective development technology propounded by Bülow Management was different from that of the Task Force and Project House since it had higher similarities to “internal benchmarking,” where the companies are provided insight into their own performances and provided with knowledge of how their products and services can be improved in order to meet the demands from their clients. This internal perspective on process improvements was separated from the original prognostic framing of benchmarking as reflective development technology since it did not include a comparison of processes across companies to identify best practices but instead took a point of departure in the performances and processes of the individual company. In this way, Bülow Management constructed a prognostic framing that drew on the construction companies’ interests in both attaining a better competitive advantage in future prequalifications and their interests in improving and optimizing their products and services.

The above accounts for Bülow Management’s identification of contradictions in the institutionalization of benchmarking and how they exploited these contradictions as institutional openings for the company to be perceived as an alternative to BEC. However, an intriguing position emerged, as Støvring reflected on the co-existence of the prognostic framings and explicitly acknowledged the focus on clients and disseminating benchmarking as a selection tool. His acknowledgement of the client focus was based on an awareness of clients’ utilization of benchmarking as a prerequisite for achieving market penetration of benchmarking and providing construction companies incentives to engage in benchmarking.

“It is a good thing that the authorities require benchmarking. If it wasn’t a legal requirement, this platform for using benchmarking wouldn’t exist. Benchmarking could not be initiated without the governmental requirements. Our entrance on the market derives from the possibility that was generated to do so. We could not have done it ten years ago” (Interview, Troels Støvring).

In this way, despite their focus on constructing a prognostic and motivational framing that appealed to the construction companies, Bülow Management was aware that the institutional legitimacy of benchmarking relied on the utilization of track records by clients, and therefore

found this focus on clients an essential element in the dissemination of benchmarking. BNKI accordingly did not seek to delegitimize the function of benchmarking as a selection tool for clients nor was it considered to carry or support this utilization. Bülow Management had exploited that other actors were attending to this dissemination strategy and focus on clients, which had created openings for other benchmarking operators to construct motivational framings supporting the interests of contractors, consulting engineers, and architects.

4.6.5 BYGGERIETS NØGLETAL APS

Another benchmarking operator entered the market soon after Bülow Management. This time it was a result of a joint initiative among small and medium sized construction companies who had interests in getting engaged in the future benchmarking activities. Byggeriets Nøgletal separated from both BEC and Bülow Management by promoting their service as the being stripped down to delivering a product that fulfilled the executives' orders for bidding on state and social housing building projects. This clear focus appeared in a newspaper article (Mester Tidende 13.05.2012) and on their website. When choosing Byggeriets Nøgletal to conduct benchmarking contractors, consulting engineers and architects would receive a product that met the legal requirements and provided the needed track records that permitted them to bid on future projects requiring KPIs.

By cutting off any additional service, Byggeriets Nøgletal was able to offer prices much lower than BEC and Bülow, ranging from 500 DKK to 2,500 DKK depending on the size of the building project. On their web site, under an example of a fact sheet, Byggeriets Nøgletal wrote:

“Make your biddings more competitive. Reduce the cost to your benchmarking operator.
Choose Byggeriets Nøgletal aps.”¹⁴

In this way, Byggeriets Nøgletal was aiming at those companies that were interested in an inexpensive delivery of KPIs and identified an economic opportunity to engage as a benchmarking operator. The company promoted a motivational framing appealing to construction companies that perceived track records as a necessity to bid on building projects

¹⁴ <http://www.byggerietsnoegletal.dk/> - Accessed 29-08-2012

where track records were required but, other than that, did not have any interests in benchmarking. Byggeriets Nøgletal accordingly exploited the market's increasing requirements for track records and acceptance of benchmarking as a normalizing governing technology. What separates this motivational framing from BEC and Bülow Management is that Byggeriets Nøgletal did not actively communicate benchmarking in ways that could further strengthen the institutionalization of benchmarking as a normalizing governing technology improving building products by providing incentive for construction companies to pursue good KPIs. In this way, this benchmarking operator did not actively draw on the diagnostic framing of changing the competition from price to quality but instead exploited a contradiction between the increasingly acceptance of this framing in the construction industry and those construction companies that were solely considering track records to be a necessity for bidding on building projects where track records were required.

4.6.6 BEC AS AN IMPARTIAL BENCHMARKING OPERATOR IN A COMPETITIVE MARKET

The competitor's influenced the strategies of BEC in different ways by strengthening the ambitions of a more market-oriented BEC. This was caused both by the new competition of attracting customers to buy their benchmarking products and services but also because it indirectly provided the centre opportunities to develop a more market-oriented prognostic framing of benchmarking since the Ministry of Social Affairs and Dansk Byggeri withdrew from BEC's board of directors and instead appointed representatives from respective clients for social housing and contractor companies. EBST also withdrew from BEC's board of directors and did not appoint another representative. This withdrawal was rooted in these actors' calculated political considerations of avoiding accusations of distortion of competition on this newly emerged market for benchmarking operators. An important condition that could also have influenced the decision of withdrawal was that the simplification of the benchmarking systems had made benchmarking a less controversial political issue for the board members to handle since the simplification was a political compromise between the political actors who were represented in BEC's board of directors. Further, it was from the birth of the centre a strong ambition among the initiators that BEC was not to be the only benchmarking operator in

the market, so this changed constellation of the board members was probably already planned by the authorities and Dansk Byggeri.

The entrance of competitors entailed that BEC was no longer, to the same extent, to be exposed to major political discussions where the authorities and professional associations in consultation could influence, monitor, and control the future prognostic framings of benchmarking. It could be perceived as an unfair competitive advantage for BEC if the centre was continually having a strong influence in constructing the prognostic framings of benchmarking in collaboration with the most politically influential actors of the construction industry. Instead, the board of directors and the managing director were to attend to the purpose of establishing and supporting a strategy that strengthened BEC as a competitive operator of benchmarking and simultaneously fulfilled the visions of the centre.

The changed constellation of the board members had an important impact on BEC's future strategic ambitions since it created better opportunities for the centre to focus less on the political struggles between actors with diverse interests in benchmarking in favor of focusing more on the requests from the market for BEC to communicate and disseminate benchmarking in a practical and local context that was more appealing to companies in the construction industry. According to Hesdorf, this orientation was further boosted by the competition:

“The fact that we now find ourselves in a competition situation has forced us to be even more accurate about what our customers can expect from BEC. We have always had this focus, but now we need to be even more accurate, because when, for instance, a contractor needs KPIs he automatically chooses the benchmarking operator where he is provided the best service. This has forced us to be more accurate about the customer service we provide” (Interview, Peter Hesdorf).

“Today we position ourselves and communicate BEC as a provider of a service. In the same way companies choose accountants, they now choose their benchmarking operator. They choose the operator based on their prices and their abilities to provide services among other criteria” (Interview, Peter Hesdorf).

Additionally, Hesdorf pointed out that the competition entailed that BEC could step out of the widespread perception of BEC as the authorities' right-hand man:

“The competition has paradoxically helped us, since we are no longer in a situation where we are the only company offering a benchmarking service. Some people have called it monopoly, which is wrong, because it has never been a monopoly—anybody could sell this service” (Interview, Peter Hesdorf).

BEC maintained the centre’s ambition of generating market transparency, which required a continued focus on disseminating benchmarking to the clients that were not subjected to the executive orders. This focus outlined the future strategic decisions that were made by BEC: If contractors, consulting engineers, and architects were to actively request benchmarking, they had to be provided sufficient incentives for defraying these expenses. According to BEC, the incentives were to be found through an increased demand for KPIs in prequalifications.

“It is evident that [so far] the legal requirements have been a massive driver for companies to voluntarily request benchmarking. But I think that this tendency is changing. Some companies are voluntarily requesting benchmarking for the purpose of marketing. They know that this is going to be important [in future prequalifications]—not only in state and social housing building projects. They see in the tender documents that other kinds of clients are requiring KPIs” (Interview, Peter Hesdorf).

Besides this increased focus on increasing clients’ utilization and demands for benchmarking in the prequalification, BEC further developed a product that facilitated companies’ internal utilization of benchmarking as a management tool, which reflected an interest in the prognostic framing of benchmarking as a reflective development technology in the term of “internal benchmarking.”

“Benchmarking must be used internally in the contractor, consulting engineering or architect company. What we can do to promote this is to deliver some methods and tools that can facilitate such utilization. E.g., we deliver a report¹⁵ about the KPIs that can be used by the management of the companies to understand their market position. But reading this report does not necessarily mean that it is used internally in the management of the company. This requires an active decision by the management to do so. But now we have reached to a point where, A: companies’ KPIs matter. They are important and

¹⁵ An example of the report can be found at:

http://www.byggeevaluering.dk/media/29096/noeglervalsrapport_ent_demo_2012.pdf - Accessed 20-10-2012

they cannot be neglected. And B: We deliver some tools that facilitate an internal utilization of the KPIs in the company. The prerequisites are in place, which they weren't when we started in 2004. So I do not think that we could successfully have sold them as internal management tool at that time" (Interview, Peter Hesdorf).

The competition of attracting customers had caused the benchmarking operators to be highly aware of the importance of constructing motivational framings that could appeal to the market. Characteristic for all three benchmarking operators is that they all draw on benchmarking as a normalizing governing technology in some way or another but also that they have different perceptions of the strategies of how to most successfully or legitimately carry and support this institutionalization.

4.6.7 COMPETITION ENTAILS IMPLICATIONS FOR PRODUCING COHERENT FRAMINGS

As described above, the existence of three benchmarking operators entailed that the benchmarking operators were attempting to institutionalize benchmarking as a normalizing governing technology in different ways by propounding diverse instrumental purposes and overall objectives of benchmarking to their customers (contractors, consulting engineers, and architects). The competition revealed how the executive orders could facilitate a coexistence of different prognostic and motivational framings without deviating from the legal requirements. The diverse promotion and interpretations of benchmarking propounded by the three benchmarking operators produced a coexistence of different diagnostic, prognostic, and motivational framings that contractors, consulting engineers, and architects could choose from when selecting their benchmarking operator. As a consequence, these practitioners from the construction industry were given a newly risen opportunity to influence the orientation of the institutionalization from which benchmarking was to find its legitimacy. Accordingly, a decision made several years ago entailing that construction companies were to be imposed the expenses of benchmarking was suddenly showing to be a very important aspect in the future formulation of framings and thus institutionalization of benchmarking.

The benchmarking operators' attempts to influence the institutionalization by propounding different initiatives in their respective prognostic framings were further challenged by the other benchmarking operators, thus entailing implications for a production of coherent institutionalization. Such implications became clear as BEC attempted to promote their

ambitions for institutionalizing benchmarking as a normalizing governing technology by means of two strategic initiatives: publications of KPIs and Bygge Rating. These initiatives were challenged by Byggeriets Nøgletal and Bülow Management as their ambitions for the institutionalization were not in line with the objectives of the two initiatives. In the following, the implications will be briefly accounted for. For a more detailed exposition of the development and struggles between the benchmarking operators, see appendix E.

Despite the challenges of operating on a market with competitors who had different objectives for benchmarking, BEC did not deviate from their ambition of generating transparency of the construction industry. The ambition of publishing all KPIs from the benchmarking system was, however, not supported by the two other benchmarking operators. Originally, Bülow Management prepared the ground for total transparency of the KPIs (see Appendix D), but pressures from their costumers caused a cancellation of this ambition (Interview Troels Støvring). As a result, the publication strategy revealed contradictions between the ambition of driving companies to request benchmarking on a voluntary basis with interests in performance improvements and the ambition of generating total transparency of the market for the benefit of clients. As a result, the publication initiative resulted in a transparency consisting of BEC only publishing KPIs from building projects subjected to the executive order and building projects where construction companies had voluntarily chosen to publish their KPIs from private projects. Additionally, EBST and the Danish Building Defect Fund published the KPIs from, respectively, state and social housing building projects. This publication was realized prior to BEC's publication of KPIs. In this way, the original ambition of total transparency was highly reduced, as the publication of KPIs was limited to building projects subjected to the executive orders and building projects where construction companies voluntarily had chosen to support BEC's ambition of transparency.

Another attempt from BEC to promote their prognostic framing of benchmarking as a normalizing governing technology was also influenced by Bülow Management and Byggeriets Nøgletal.

“Bygge Rating” was presented in 2011 at BEC's annual meeting and had the purpose of making it easier for clients to assess their bidder's performance by providing a supplement to the track records that could facilitate the use of track records for selection of collaborators (Byggeri.dk, 2011).

“This is a ‘light’ version [of the track records] that facilitates the communication about companies’ KPIs. Bygge Rating will be ideal when comparing several companies” (Peter Hesdorf, Byggeri.dk, 2011).

“For us it is about increasing the utilization of benchmarking, and we consider that Bygge Rating is an efficient way” (Peter Hesdorf, Erhvervsbladet.dk, 2011).

Bygge Rating was developed in collaboration with clients and also representatives from contractors, consulting engineers and architects and professional associations¹⁶ (Interview Peter Hesdorf). The system was very illustrative, showing the performance of the companies by grading the different KPIs from A to E. BEC placed “Bygge Rating” on the front page of the track records, and the initiative was intended to strengthen clients in their selection of collaborators and entail that benchmarking would be increasingly accepted and requested by clients as a valued selection tool.

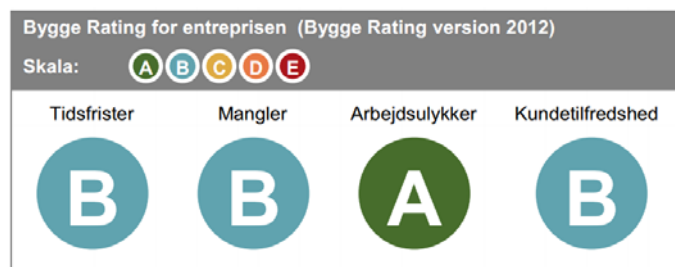


Figure 5: Example of Bygge Rating for contractors. Showing from left to right: appliance with time, building defects, work accident, and client satisfaction.

BEC attempted to disseminate Bygge Rating to the other benchmarking operators by making the system open source. But Bülow Management was not interested in this simplification of the KPIs and found it contradictory to their focus on contractors, consulting engineers, and architects.

The challenges for promoting Bygge Rating as a legitimate tool for clients’ selection of bidders became further challenged, as Byggeriets Nøgletal chose to develop their own rating system from an interest of providing construction companies an opportunity to use their KPIs for marketing.

¹⁶ <http://www.byggeevaluering.dk/noegletal/bygge-rating.aspx> - accessed 22-10-2012

“Even though you may have achieved good track records, it can still be difficult to promote your performance in brochures, advertisements or on your web page.

For this purpose we calculate your KPIs into a smiley—also called Bygge Rating by others.”¹⁷

Byggeriets Nøgletal accordingly introduced “smiley” as a way for companies to communicate their performance in a different way.



Figure 6: Example of alternative rating system from Byggeriets Nøgletal's website

The alternative rating system accordingly entailed that the KPIs were not calculated into consistent ratings, as the criteria for the ratings were different from those of BEC, and the visual presentation of the ratings were not absolutely comparable.

The dissemination of Bygge Rating to the clients was accordingly reduced to the track records from BEC. BEC attempted to cope with this issue by developing an online converter of KPIs to ratings.

The two above attempts by BEC to strengthen the institutionalization in the direction of their ambitions reveal how Bülow Management and Byggeriets Nøgletal were hindering BEC in pursuing ambitions of a more transparent market and attempts to disseminate benchmarking to clients as a simple selection tool to be used in prequalifications. As a consequence of a market with several benchmarking operators with different interests in the orientation of the institutionalization, political struggles emerged as one benchmarking operator attempt to strengthen the institutionalization in an orientation which is not commonly shared by the three benchmarking operators. It had accordingly become even more difficult for benchmarking

¹⁷ www.byggerietsnoegletal.dk/Smiley - Accessed 13-08-2012

operators to construct consistent framings of benchmarking that could determine the orientation of the institutionalization.

4.7 INTERPRETATIONS OF BENCHMARKING AMONG PRACTITIONERS

The last chapter demonstrated how benchmarking had been politically negotiated in ways that were acceptable for the whole range of professional association and the authorities. In favor of an institutionalization towards more market-oriented instrumental purposes and overall objectives for benchmarking pointing in a direction of changing the competition from price to quality, the transparency and the ambition of utilizing benchmarking as a socially constructive technology had been given lower priorities. The politically negotiated benchmarking institution was stabilized around the perception of benchmarking as a normalizing governing technology and relied on a normative interpretation among construction companies that the track records were used by clients in their selection of collaborators in the prequalification.

As a result of the simplification and this more market appealing configuration of benchmarking, new benchmarking operators emerged and challenged BEC in its position to influence and communicate benchmarking uniformly. As a consequence, multiple interpretations of benchmarking's instrumental purposes and overall objectives became present, as the benchmarking operators made use of different communication strategies to construct motivational framings that could gain support from the practitioners in the construction industry. This entailed that the institutionalization of benchmarking to a much greater degree was left in the hands of the contractors, consulting engineers, architects, and clients since their choice of benchmarking operator automatically would reflect which motivational framing they found to be most appealing and to consider their interest.

In this way, the political struggles of the institutionalization were no longer to be found between the professional associations and the authorities but instead were between the benchmarking operators and the practitioners. The decreased involvement of the professional association and the authorities had resulted in a new political situation, where the practitioners had become the all-important actors that could politically orientate and coerce the benchmarking operators to design their services to accommodate their requirements for how benchmarking best could support their interpretations and expectations to a normalizing governing technology.

The last part of the analysis seeks to uncover how benchmarking is understood and interpreted among the practitioners in the construction industry. It is important to point out that the

empirical foundation is not sufficiently extensive to reflect a common interpretation of benchmarking among the practitioners in the Danish construction industry. However, the aim of the part of the analysis is not to come up with conclusive observations of the construction industry as a whole but rather to reveal how benchmarking can be interpreted and derive practical effects when practitioners incorporate the benchmarking institution in their experienced reality.

This part, of the analysis, accordingly reveals how (a sample of) practitioners are conforming to the benchmarking institution and how benchmarking is transformed in practice. Further, through the exposition of different kind of practitioners' interpretations of benchmarking, the analysis will focus attention on the interplay between and different interpretations among practitioners that benchmarking gives rise to. Such knowledge is highly important in order to understand the institutional contradictions between the politically negotiated benchmarking institution and the practical unfolding of benchmarking, which can potentially result in future political struggles and affect the institutionalization.

4.7.1 CONTRACTING COMPANIES

My interviews with the contractors revealed a high degree of enrollment in the prognostic framing of benchmarking as a normalizing governing technology. It became clear that the contractors I talked to mainly answered my questions about their perceptions of the benchmarking initiative in a way that reflected their engagement in attaining good KPIs with the purpose of being in a better position in prequalifications.

The interviews revealed that benchmarking as a normalizing governing technology had penetrated the strategies of the companies as a legitimate element in how the contractors perceived the accomplishment of achieving both good performance on their building projects and also how benchmarking could entail economic benefits in the form of better competitive positions in future prequalifications. In this way, benchmarking had succeeded in attaining some degree of awareness in the strategic decisions made to engender a more solid competitive position. Some aspects of benchmarking were, however, criticized to counteract the utilization of benchmarking as a normalizing governing technology, these being publications of KPIs, clients' utilization of KPIs in prequalifications, KPIs on work accidents, and building defects as a legitimate measure for quality.

INDICATIONS OF A NORMALIZING CONFORMITY TO BENCHMARKING AS NORMALIZING GOVERNING TECHNOLOGY

Contractor A¹⁸ was supportive of the idea of changing the competition of the market towards quality performance but did not yet experience that benchmarking had been given much emphasis in the prequalifications.

“I have experienced that a lot of clients require KPIs for their prequalifications, but I question how much this information is used” (Interview, Contractor A).

This indicates that even though the contractor was questioning the utilization of benchmarking by clients, and thus the sanctions bad KPIs would entail, the raising requirements for track records seemed to make an impression. Despite his skepticism, the respondent revealed that the company was conforming to benchmarking as a selection tool. He explained how the company had made a strategic decision of a continuing registration of building projects that were not

¹⁸ All interview persons were anonymized

necessarily subjected to the executive orders for the purpose of having a track record that reflected an accurate picture of the company's performance:

“Our motive to benchmark a certain number of building projects is based on our interest in having a track record that is fair. If you have seven or eight building projects in your track record and one of them went poorly, it will affect your overall track record. [...] We do not want our track record to be influenced by one discontent client. We make much use of the track record in prequalifications” (Interview, Contractor A).

This statement is interesting as it both reflects how the company's strategic decisions are based on the ambition of being rightfully assessed by clients in the prequalifications and, simultaneously, how the legal requirements of benchmarking are perceived to be insufficient in attaining such a track record. The company's engagement in benchmarking indicates a normalizing effect of benchmarking, as the company's assessment of the consequences of having a track record that was not perceived to reflect an accurate picture of the company's performance counterbalanced for the cost of conducting benchmarking voluntarily on a number of building projects. In this way, benchmarking had attained legitimacy as a strategic element in the considerations of the company's bidding position.

Contractor A was additionally expressing another self-imposed normalizing behavior, as the company had chosen to be observant of whether the track record consisted of KPIs from a wide range of different types of building projects.

“It is important for us that we have relevant KPIs in relation to the building projects that we bid on. For example, it is not sufficient to provide KPIs from a parking garage if we are to bid on housing building project” (Interview, Contractor A).

Proponents of benchmarking as a normalizing governing technology would be excited about such self-imposed initiatives since they reflect how this contractor has chosen to transcend the requirements of the executive orders through a strategic consideration of the consequences of potential deselections in the prequalifications.

Contractor A additionally expressed satisfaction with a Bülow Management tool for measuring the building process during execution of the project. This indicates that Bülow Management had been able to successfully develop a product that could support this contractor's building

processes in ways that the company found prudent in relation to their interpretations of benchmarking.

“[Bülow Management’s products] are providing value in the building process. This generates values here and now instead of only using KPIs for your next bid” (Contractor A).

Contractor B also revealed some indication of normalizing effects of benchmarking:

“A contractor will lean over backwards on building projects that are being benchmarked, no doubt about that [...] When you know that benchmarking entails consequences [in the prequalification], you automatically please your client more than usually. [...] I think that the product and the process are better in building projects that are subjected to benchmarking. And in the end that is the main issue” (Contractor B).

Another contractor, Contractor D, was skeptic of the representativity of track records for large contractors who have track records that embrace a larger amount of building projects:

“Fundamentally I do not think that many contractors are interested in the benchmarking initiative. If we could choose, it would not exist. But since it is here, we need to keep a firm hold of the system, because clients use this to compare us with our competitors. There is a strong probability that large contractors can be punished due to their KPIs, because when you have a track record that consists of many building projects, it is difficult to achieve a good track record” (Interview, Contractor D).

Again this contractor revealed a high awareness and consideration of the consequences benchmarking could entail as a normalizing governing technology.

The contractor revealed that their engagement in benchmarking had been increased as a result of the added requirements for KPIs in tender documents:

“Earlier, no clients required track records even though they were obliged to do so according to the executive orders. I think that benchmarking started to penetrate the market when the social housing sector was included in the initiative. I think that KPIs are increasingly provided more attention concurrently with clients’ requirements for

KPIs. We have also seen private clients require KPIs in their tender documents” (Interview, Contractor D).

Asked about whether the company managed building projects that are subjected to benchmarking differently than other building projects, the respondent’s reply indicated a clear conformity to benchmarking:

“We contact the project manager on benchmarking projects. Partly in the beginning of the project but particularly prior to the handing over process to secure that, for example, defects registered during the building project are not registered. [...] The information to the project managers consists of what the person needs to be aware of in regard to the registration. We also encourage the project manager to go into a dialog with the client about what is to be registered and what is not to be registered. [...] We have experienced a lacking knowledge about the correlations between the input and the output of the system. [...] In the beginning of a large building project we have a start-up workshop with the client where we also talk about the KPIs, because we find it important that we match our expectations throughout the building process. In this way we attempt to find out what is important to the client and what he values highly. [...] This matching of expectations has shown some good effects” (Interview, Contractor D).

“We have to behave well. And of course there is an element of learning in all this. The construction industry has been characterized by bad quality performances and lacking compliances with time schedule in many years without anybody having been able to turn this around. [...] So in some way benchmarking is an obvious opportunity to have something that is persistent and generating changes that have effects. Sometimes we need such ambitious initiatives in order to take the problems seriously. Benchmarking has entailed that we are taking time compliance and defects seriously in this company (Interview, Contractor D).

Contractor D additionally explained that their focus on matching expectations with their clients were not reduced to projects that were subjected to benchmarking but also applied in other building and construction projects.

“Today it is commonly recognized that we have to treat our clients properly; not only on benchmarking projects, but in general. No doubt that benchmarking has been a lever to

this focus on a better dialog with the client. This is positive because it is something that the market has been missing” (Interview, Contractor D).

Contractor C also revealed that benchmarking had effects on their building projects and that the track record was considered to be an important element in their marketing. According to the contractor, benchmarking had created an increased focus on time compliance and the amount of defects.

“I believe that benchmarking has had influence on our focus on time compliance and defects” (Interview, Contractor C).

“On larger building projects, we have meetings with the client because, if the building process is going poorly and we have not had any contact with the client, the consulting engineering company will blame us for the problems. Therefore we find it reasonable that we have meetings with the client and tell him our version” (Interview, Contractor C).

“One positive effect of benchmarking is that we have an extra focus on handing over the building with the least amount of defects if the project is subjected to benchmarking. This has had an influence on the entire organization, and today we seek to correct defects faster and earlier than previously” (Interview, Contractor C).

The above statements from the four contractors clearly indicate that the contractors interviewed for this study are actively conforming their product and services to benchmarking as a normalizing governing technology. The experienced prospect to be assessed on their track records has prompted these four actors to provide benchmarking different degrees of awareness in building projects subjected to benchmarking. It is intriguing to note how differently these companies are conforming to benchmarking and transforming the institution to practices, all from the same motivation of avoiding deselection in future prequalification where they are assessed on their performances. The interviews reveal that the contractor’s self-imposed conformity to benchmarking is based on calculated expectations of being assessed by clients on their KPIs. It is, however, interesting to note that, in addition to these expectations, several of the contractors recognized that benchmarking was supporting other managerial interests in the companies by strengthening the communication with clients and increasing the focus on time compliance and defects. The contractors’ interpretations of benchmarking as a normalizing

governing technology had prompted several of the contractors to be reflective of how to conform their products and services in ways that could secure better performances on their building projects. This indicates an experienced necessity to utilize benchmarking as a reflective development technology to gain insight into the individual companies' possibilities to improve their performances and develop their product and services to attain good and consistent KPIs in their track records.

BENCHMARKING AS A REFLECTIVE DEVELOPMENT TECHNOLOGY

Of the four contractors I talked to none used benchmarking as a technology to extract knowledge about other companies' practices for the purpose of achieving a competitive advantage. None of the four contractors expressed an interest in gaining insight into their competitors' processes. As mentioned above, the improvement initiatives were manifested at a local and company internal level.

“Benchmarking is a selection tool for the clients, and maybe it works for this purpose. But when benchmarking was introduced there were two purposes for the initiative. It should be a tool for clients to select their collaborators, so it was not only price but also competences that determined who was chosen. We fully support this purpose. The second purpose was that benchmarking should be a tool for contractors to compare themselves with other contractors for the purpose of improvements. I have not heard about any contractor who uses benchmarking for this purpose” (Interview, Contractor A).

Two of the four contractors used their own evaluation system to assess their performances, which had similarities to the characteristics of internal benchmarking, where the comparisons of projects were conducted between the projects in the company.

“Our own benchmarking system is much more comprehensive [than the benchmarking system for the Danish construction industry]. It contains all our data on work accidents, building defects, customer satisfaction, etc. We have far more confidence in our own system. So when we discuss and assess our company's development, we do not use the benchmarking system [for the Danish construction industry]. We note that our track record is good, but when we assess out internal development of how we achieve better

customer satisfaction, employee satisfaction, work accident, and quality products, we use our own reliable data” (Interview, Contractor A).

“On projects that exceed 3m kroner, we send out a questionnaire to the client containing eight questions: “Have we delivered the product on time?”; “Has the collaboration been satisfactory?”; “Do you want to use our company again?” etc. All our internal assessments of our performance have these responses as key issues. Customer satisfaction is central for our company” (Interview, Contractor A).

Contractor B also had their own system to assess their development and to plan their strategic orientation and improvement initiatives from, as they found the benchmarking system insufficient for providing knowledge about their internal improvements potential.

“Even though we are conducting a building project that is submitted to benchmarking, we simultaneously conduct our own evaluation of the project. We do so because we find the four parameters [in the benchmarking system] too limited to extract knowledge about what we find to be important information about the project” (Interview, Contractor B).

These statements indicate that the original ambition for benchmarking as a reflective development technology had not found legitimacy among the four contractors. If the institutionalization at some point in the future is to be orientated in this direction, it is interesting to note that several of the contractors already make use of internal evaluation systems.

LACKING UTILIZATION OF KPIs IN PREQUALIFICATIONS

Despite the indications of conforming behavior, one main issue was raised by the full range of contractors I talked to, as they all questioned whether benchmarking was as an important element in the prequalification of contractors as it was supposed to be. This must be considered to constitute a high threat for institutionalizing benchmarking as a normalizing governing technology (and the strengths of this argument had already been revealed in 2007 where benchmarking was radically transformed), as the contractors’ conforming behavior and their incentives to adjust their products and services to the KPIs in the benchmarking system was

based on their interpretation and calculated expectation of clients' utilization of track records in prequalifications.

“Fundamentally, it is a good idea that clients request other parameters than price. But benchmarking is just a little part of these other parameters: If price counts 60%, it leaves 40% for other things. These 40% consist of, for example, quality control, environmental management, plans of logistics, economical self-certification forms, etc. Accordingly, only a couple of percents are left for the track record” (Interview, Contractor B).

Another contractor also indicated a lacking experience of clients' utilization of track records in prequalifications:

“We rarely experience that KPIs are used. It is very seldom that they are explicit criteria in a prequalification and are attached importance to by clients” (Interview, Contractor B).

Asked about this adversarial relationship between the conformity to KPIs and the lacking utilization of KPIs in prequalification, Contractor B revealed one of the central prerequisites for institutionalizing benchmarking as a normalizing governing technology:

“KPIs are used in some occasions. I will not refuse that clients glance at the track records, but it is not obvious how they are assessed in the prequalification. [...] The best thing for benchmarking would be if it was requested more by clients” (Interview, Contractor B).

“It is commonly known that benchmarking is thought to qualify clients in selecting collaborators. But I wish that clients will tell us what they need [...] If clients told us: ‘This is important for us,’ then we would all follow suit. But since somebody who has difficulties in understanding the value of the system is making the decisions, benchmarking becomes rather artificial. No doubt that benchmarking is providing some value because building projects are improved, but benchmarking is just not used as intended” (Interview, Contractor B).

Contractor C also did not recognize a widespread utilization of benchmarking in the prequalifications:

“Overall, we have not experienced that we have been chosen in a prequalification based on our track record. We have submitted our track records in some of our biddings, but we have not experienced tender documents that required some minimum performance requirements. [...] Whether we have been selected or deselected based on our KPIs, we do not know” (Interview, Contractor C).

“Some clients take track records seriously in the prequalification, but usually it is the bid with the lowest price that is selected. [...] We experience prequalifications where price only counts 50–60 % but still it is the lowest bid that is selected. But at some point it will yet again be prevalent to distinguish oneself on other than price, and meanwhile we have been practicing” (Interview, Contractor C).

Despite their lack of experiences of getting credit for their KPIs in prequalifications, the contractors have still chosen to incorporate benchmarking in their strategy to attain a potential competitive advantage in prequalifications. However, the commonly experienced perception of a lacking utilization of track records in clients’ selection of contractors must be understood as a potential institutional treat to benchmarking as a normalizing governing technology.

KPIs REDUCE INCENTIVES FOR CONFORMITY

Although the contractors were conforming to benchmarking, despite their lacking experiences of getting credit for their KPIs in prequalifications, the contractors expressed discontent with two of the KPIs in the track record: KPIs on work accidents and KPIs on building defects. If the four contractors are reflecting a widespread perception in their profession, the opposition to the KPIs can potentially threaten the legitimacy of benchmarking as a normalizing governing technology, as such critiques of the benchmarking system reflect an experienced lack of correlation between the figures and the perception of the KPIs as reflecting valid performance capabilities. If contractors do not consider the benchmarking system to be adequately reflecting their performances, it can potentially reduce the experienced rationale of conforming to the KPIs.

KPIs ON WORK ACCIDENTS

The KPIs on work accidents were not perceived to provide an adequate reflection of the contractors' working environment nor were they perceived to be a just reflection of the performance that clients could expect from their collaborators.

The following statements reveal the contractors' opposition to the KPIs on work accidents.

"If you compare our company to other large contractors, you will find that our KPIs on work accidents are not fair. We have one of the best work environments in the market because we do so much in this area. But if we compare our track record with our competitors, we are below average. This shows that something is wrong with these measures. When asked about this mismatch, the benchmarking operator replied that 90% of all building projects have no work accidents. And that is simply not correct. Ask the Danish Working Environment Authority, ask anybody. We claim that if they want to stick with these KPIs on work accidents, then it is very inexpedient that it is the contractors who report the accidents. There is no control with these figures, and there are no consequences of reporting incorrect information. The statistics do not match, and the Danish Working Environment Authority agrees. We have to come up with another definition, a broader definition" (Interview, Contractor A).

"I have yet to hear about anyone who has confidence in these KPIs. Especially small contractors are vulnerable, as one single and maybe even unjust registration of an accident can result in very bad KPIs on work accidents" (Interview, Contractor A).

"I am responsible for the working environment in our company. When we went through our KPIs on work accidents, we had an accident registered because one of our employees had dropped a cup of coffee, which caused a burn on his foot because he did not wear safety shoes. As a consequence, he had to stay home for a couple of days, which entailed that we were no longer an A-company and were unable to be so for three years. Other companies would probably not have registered that accident. So where is the limit? When do you report and when do you not? This single accident entails that we, for the next three years, will appear as a B-company instead of an A-company" (Interview, Contractor B)

“If one of our men cuts his finger in a small company, the accident will not be reported. But we report these accidents because we have very structured procedures. In this way, we appear as bad performers on working environments just because we have a high focus on an area that is being reported into the system” (Interview, Contractor D)

“We have to change the KPIs on work accidents. These measures are not valid. As a contractor, you are to report your own work accidents. [...] You report the accidents that entail at least one day absent, but you do not report whether it is a serious accident or not. [...] I do not believe that there is one company that has not had creative accounting when reporting work accidents to the system. It is impossible to avoid work accidents when you conduct a building project for 80m DKK. [...] If you compare the KPIs from the benchmarking system to those from the Danish Working Environment Authority, you will notice that much fewer accidents are reported to the benchmarking system. This means that the KPIs are not valid, and in that case, they cannot be used as a competitive parameter” (Interview, Contractor C).

KPIs ON BUILDING DEFECTS

The KPIs on building defects were also causing some criticism among the contractors who did not find the KPIs representative of their overall quality performance.

“The customer satisfaction is providing a reasonable reflection of our performance, but building defects is a strange way to measure the quality of a building. And out of the ten KPIs, six are on building defects. [...] In reality, building defects are always corrected somehow. The idea is to produce a product of high quality. That is the long-term ambition. The building may stand in 100 years, and therefore it would be prudent to measure on some of these long-term quality parameters, such as ingress protection, indoor climate conditions, air quality, environmental conditions, etc. You could choose to have indicators that measure the quality of the product rather than, for example, the amount of building defects. Such indicators are much more attractive than building defects that are quickly corrected anyway” (Interview, Contractor A).

“You are an A-company¹⁹ if you have no registered building defects. But if you have been registered for one single paint blob, you are no longer an A-company, and you cannot be an A-company for the next three years. The rating system does not pay regard to the proportions of the defects as all defects are registered as equally important. That we find very demotivating because partly it is very subjective how building defects are registered and partly it does not reflect whether the client is discontented with the registered defects” (Interview, Contractor B).

Contractor C revealed how they managed the registration of defects, by being highly engaged in the registration process of building defects:

“The client consultants have difficulties with the different categories of building defects. That is why we go through the building defects together with the client consultant. [...] We talk to the client consultant about the defects before the handing over process and also have a pre-handing over process. In this way, we nip building defects in the bud” (Interview, Contractor C).

“My experience is that contractors find ways to hand in building projects without building defects, even if there have been some. And that is for the purpose of cheating the system. They come up with those kinds of solutions because the system is demotivating. And when a system is perceived as demotivating. I consider it unsuccessful” (Interview, Contractor B).

4.7.2 CONSULTING ENGINEERING COMPANIES

As the case for the four contractors, the two interviewed directors of consulting engineer companies were mainly talking from a perception of benchmarking as a normalizing governing technology, and they perceived KPIs as a prerequisite to bid on building projects where track records were required in prequalifications. Consulting Engineer A expressed the following interpretation of benchmarking:

“Benchmarking is a part of bidding on public and public-funded construction projects. We are not able to bid if we do not have KPIs. It almost equals a certification scheme.

¹⁹ According to the Bygge Rating system

But it is fair that clients require quality. In some way it sorts out the bad apples: those with low prices who cannot deliver a quality product. That is an advantage for us because we cannot compete on prices with the smaller companies. This is why we applaud initiatives that put emphasis on quality performance in a prequalification. Too many clients are prone to choose on the basis of price without knowing what end product to expect. [...] Our business philosophy makes it necessary that clients assess on our quality performance and not our prices” (Interview, Consulting Engineer A).

The consulting engineer accordingly expressed satisfaction with the instrumental purposes and objectives of benchmarking as a normalizing governing technology that provides clients additional selection criteria in their prequalifications of bidders. He, contrary to the four contractors, highly considered that the track records were utilized by clients:

“We are certain that the track records are used by the clients in the prequalifications. I do not know how much they are used, but I believe that they are used. Otherwise we would not make such efforts of conducting benchmarking” (Interview, Consulting Engineer A).

The company had accordingly conformed to these expectations of the utilization of track records as a selection tool for clients:

“We have an employee that ensures that we have a certain number of building projects with KPIs. She makes sure that we have a reasonable renewal of projects in our track record and that we have a reasonable spectrum of building projects” (Interview, Consulting Engineer A).

This indicates the same strategic conformity to benchmarking as normalizing governing technology as Contractor A, who had ensured a broad range of different types of projects with the ambition of being rightfully assessed by clients in the prequalifications and being in possession of a track record that included relevant building projects for future tasks.

Asked about why client satisfaction is a rational measure for consulting engineering companies’ performance, the director responded:

“Client satisfaction is what drives our business. Satisfied customers will use us again. And if the client finds our performance insufficient, it will appear in his satisfaction assessment of us” (Interview, Consulting Engineer A).

Paradoxically, Consulting Engineer A did not make much use of track records when the company was assessing quality in the prequalification in the position of client consultant.

“As client consultant for a public client, we do not put much importance on the rating. We assess quality in a different way. [...] If we use the rating, it may count for 5% of the overall quality performance” (Interview, Consulting Engineer A).

This statement is very interesting in relation to understanding the correlations between the conformity to benchmarking, which is based on an expectation of being assessed on the track records and the same consulting engineers’ low emphasis on track records in prequalifications. The statement indicates that the director did not consider the track record to be providing sufficient insight into bidders’ quality performances but still incorporated benchmarking in the companies’ strategic considerations of being in a good competitive position. Asked about this dilemma, the director had no clear response, as he had not personally participated in the company’s prequalifications of bidders.

However, the interview with Consulting Engineer B revealed something that could be a response to this discrepancy between utilizing benchmarking as a selection tool and the rationale in conforming to benchmarking:

“Fundamentally, we think that the service and products we provide are too complex to be reduced to an A, B, C, or D, as if they were a refrigerator. I call the rating system ‘the refrigerator model,’ and it is about simplifying something very complex to some single letter. It may make sense for a private consumer or first-time clients to see whether a consulting engineer has an A, B, or C, but more experienced clients know us. They know how we have performed in previous projects. They look into our references and see whether we have conducted corresponding projects. They also assess lots of reports that are technically complicated. All this, some think, can be summarized and reduced: ‘This is a B’” (Interview, Consulting Engineer B).

In this way, Consulting Engineer B argued that the KPIs were not providing sufficient insight into the quality performances of consulting engineering companies, but simultaneously he considered the track records to be utilized by those clients who were not very professional. The statement accordingly reveals that it is likely that the prospects of bidding on building projects where the clients are not very professional are providing sufficient incentives for consulting engineers to pursue good KPIs. Asked about how track records could gain more influence in professional clients' prequalifications of consulting engineers, Consulting Engineer B replied:

“The clients ought to figure out which questions are most sufficient to reflect their overall satisfaction with their consulting engineers. [...] It might be that the budget was exceeded and that there have been some mistakes, but the pivotal question is whether the client is satisfied or not. [...] It makes sense to make a rating system with an overall assessment of the KPIs, but this system is for the unprofessional client, first-time clients. The higher the professionalism the less sense does it make to simplify the services and performances” (Interview, Consulting Engineer B).

Consulting Engineer B revealed an interesting conformity to benchmarking that relied on strategic considerations of how the company could qualify themselves in the prequalifications with track records that were not conducted by a benchmarking operator:

“We have a new project model where we divide our projects into three categories, 1, 2, and 3 dependent on the size and complexity of the projects. On category 2 and 3 we conduct an evaluation. We do not use BEC to conduct this evaluation, but we use the same classification as in the benchmarking system. It is the same questions and weighting strategy. Based on these, we calculate our KPIs and produce a fact sheet that resembles the one from BEC, which we use in prequalifications. [...] This is a much cheaper way to do it. [...] The critical client may question the validity of KPIs that we produce ourselves, but we have yet to see how they react” (Interview, Consulting Engineer B).

“Despite our criticism, we still voluntarily conduct benchmarking on our largest and most complicated projects because we get the best references on these types of projects. We therefore also conduct benchmarking on private building projects in order to be in a better position in prequalifications where benchmarking is required. The system is here

to stay, and in that case we must try to get the best out of it” (Interview, Consulting Engineer B).

The interviewed directors of the two consulting engineering companies accordingly revealed that they, in different ways, had implemented benchmarking in their company from a perception of benchmarking as a normalizing governing technology, with an overall aim of attaining good track records that could be used in future prequalifications. However, the two directors additionally expressed skepticism of whether the track records were trustful reflections of their quality performances and accordingly questioned benchmarking’s applicability as a selection tool of consulting engineers.

4.7.3 CLIENTS

The three clients interviewed for this study revealed very different interpretations of and positions on benchmarking. Characteristic for the three clients is that they operated in different sectors of the construction industry: the private sector, the state construction sector, and the social housing sector.

Client A, the private client, found benchmarking insufficient in reflecting construction companies' performances:

“I believe that building projects are way too complex to be simplified to some few KPIs. There are so many underlying elements in a building project that will never appear in such objective criteria” (Interview, Client A).

In this way, Client A did not consider track records to be an adequate selection tool for clients. His statements and position to benchmarking solely addressed how this utilization of benchmarking was an insufficient and invalid foundation to choose collaborators from.

“I believe that the validity of the KPIs is so doubtful that it is totally unfair that clients assess their bidders on these. The track records only contain a very little number of the building projects that companies conduct and are therefore not representative for their performances. Any professional client, public or private, ought to have sufficient insight into the market to make decisions based on their knowledge. I, a client, cannot do so; he does not deserve to be called ‘professional.’ The public client ought to be so professional that they did not need a benchmarking system” (Interview, Client A).

Accordingly, Client A isolated the instrumental purposes and overall purposes for benchmarking to a selection tool for clients, thus not considering the effects of benchmarking as a normalizing governing technology that could derive an improved product and services from collaborators, as they interpret and conform to the KPIs in the benchmarking system. This indicates a perception of benchmarking as a technology that counteracts the client's qualified selection of collaborators.

Client B from the state construction sector was also consequently considering benchmarking as a selection tool for clients. However, contrary to Client A, he was enthusiastic of benchmarking's ability to provide insight in bidders' performances:

“Benchmarking was originally introduced as something that could improve productivity in the construction industry, or something like that. But I also think that benchmarking can help clients to separate the sheep from the goats. [...] Now clients have these track records from the bidders, and they can see if the companies have had bad KPIs on client satisfaction and other quality criteria. In this way, I think that benchmarking provides clients a good foundation to choose their collaborators from” (Interview, Client B).

“Benchmarking provides an objective instrument to avoid , for example, corruption. It helps clients to select those companies that are best in their profession” (Interview, Client B).

Client B gave an example of an experience he had with the utilization of benchmarking as a selection tool. The example clearly demonstrates how the track records can be interpreted in many different ways to assess bidders' performances. Further, the example indicates the widespread perception of clients' inconsistent and opaque utilization of KPIs in prequalifications.

“Recently I participated in a prequalification where track records were used. [...] The end users [responsible for choosing collaborators] did not make an overall assessment of the KPIs. They only assessed the KPIs on customer satisfaction. They did not want to collaborate with companies with bad KPIs on customer satisfaction and did not care about the rest of the KPIs. I find no problems with this disposition because they used the track records to assess what they found to be of greatest importance. You are allowed to attach importance to the KPIs as you like. And they made it perfectly clear that they had had too many experiences with companies that were not willing to collaborate. And roughly speaking, they were not interested in the number of defects and work accidents and so on. [...] They did not consider the utilization of track records as an obligation but, on the contrary, as something which they could use to assess the bidders” (Interview, Client B).

Client C, from the social housing sector, who was obliged to require track records in their prequalifications, expressed a more reflective interpretation of the benchmarking initiative but reported that the company did not actively use the track records as selection criteria of their bidders. He gave the following account for this lacking utilization:

“KPIs might be useful, but I must admit that we do not use them much. In a prequalification, they count for maybe five percent. [...] We do not provide much value to the compliance with time schedule, and building defects we get from Danish Building Defects Fund” (Interview, Client C)

“If you are going to build a complex building, KPIs are of less importance because you need some more documentation for the bidders’ performances on that kind of building projects. On less complex building projects, KPIs might be useful as a reflection of some sort of performance” (Interview, Client C).

“The building defects that are registered by the Danish Building Defects Fund are those of a more serious character that have some importance for the building. [...] I question whether it is appropriate to equate quality of buildings to the amount of building defects registered at the handing over process. But that is what many clients do because building defects are what they can see when the building is handed over. Many clients do not have a focus on whether the buildings are dense and solid. Therefore they assess on the performance of minor building defects. I believe that the focus on building defects is rather exaggerated” (Interview, Client C).

Asked about the applicability of KPIs on time compliance as quality criteria, Client C responded:

“Of course, compliance with time schedule is important, but we just never consider it a problem since our projects are mostly handed over on time. It is very seldom that time is an issue and that it exceeds more than what we consider to be fair” (Interview, Client C).

He, however, recognized that the KPIs on customer satisfaction could be useful as indications of quality performances:

“The subjective KPIs on collaboration and whether clients will use the company again is OK and can be ascribed some value. But we must also remember that these KPIs are

assessed subjectively and depend on the peoples from the company” (Interview, Client C).

Not surprisingly, Client C found the track records for consulting engineers and architects, strictly reflecting customer satisfaction, to be of higher value as a selection criteria than the track records for contractors:

“I find the KPIs for consulting engineers and architects more useful because the questions that are the foundation for their grades reflect their performance better than, for example, contractors’ building defects” (Interview, Client C).

“So far we have experienced that consulting engineers have had a focus on the evaluation. But we have not experienced that contractors have had a focus on achieving good KPIs. So for them I do not think that the system has had a repressive effect. So far, they have only perceived benchmarking to be inconvenient and expensive” (Interview, Client C).

These statements indicate that the client experienced benchmarking to have effects on consulting engineers’ and architects’ conformity and interpretation of benchmarking as a normalizing governing technology. This indicates that the client, contrary to Client A, recognized that benchmarking could derive improved products and services from their collaborators, as benchmarking was providing incentives for construction companies to accommodate the client’s demands. However, the statements also reveal a questioning of whether benchmarking improved the building processes by contractors’ conformity and striving for good KPIs.

Client C revealed an even higher degree of reflectivity, as he, unsolicited, considered how benchmarking could attain greater effects on the local building project and prompt construction companies to pursue and conform to KPIs:

“I wonder why we are obliged to require KPIs in our prequalification, when nobody has made considerations and determinations about how we shall assess them. Of course, this entails that we have some degree of freedom to assess them or not. But I find it strange that nobody demands how KPIs must be assessed” (Interview, Client C).

“If we had some legal requirements for how to use KPIs in the prequalification and how much clients should value them, I think that it would entail that our collaborators would have an increased focus on achieving good KPIs. I think that this would increase the performances on building projects. Even though I do not wish it to be so, I think that the only way for this system to advance is to force people to use it and attach importance to it” (Interview, Client C).

In this way, Client C hit the nail on the head with his recommendation by addressing the persistent issue that had been raised by many actors (including the contractors and consulting engineers interviewed for this study) throughout the institutionalization of benchmarking. The inconsistencies and uncertainties of clients’ assessment and utilization of track records counteracted the construction companies’ incentives to engage in benchmarking on a higher strategic level. He continued with considerations of why benchmarking had yet not greatly motivated construction companies to adjust their products and services to the aim of achieving good KPIs:

“I think that some companies are frustrated about having good KPIs without getting credit for it. It is not because I call for a set of rules for how clients must use KPIs, but I just wonder why nobody has sat down and decided how clients shall use benchmarking. What weight are clients to put on KPIs? How must they be assessed?” (Interview, Client C)

He concluded with the following recommendations to the further institutionalization of benchmarking:

“The benchmarking system is applicable and operational, but it needs to be entrenched and to be used properly so it becomes a management tool that is used during the building process with the purpose of attaining better quality. Otherwise it just ends up being something that the authorities once insisted on. If benchmarking was modified in this direction, I think it would work much better” (Interview, Client C).

“I am willing to compromise some of my usual prequalification procedures and use KPIs more actively if I know that this will get me a better building process” (Interview, Client C).

This exposition of the interview with Client C is particularly interesting for this study, as it elucidates how the client was fully aware of the potential positive effects of benchmarking as generating improvements on a local level in the individual building project, but simultaneously the client did not consider his company to be responsible for driving this prerequisite for the institutionalization of benchmarking as a normalizing governing technology.

4.7.4 THE INSTITUTIONALIZATION OF BENCHMARKING AMONG PRACTITIONERS

The above exposition of contractors,' consultant engineers,' and clients' interpretation and normative conformity to benchmarking have uncovered important insight into how benchmarking seems to be institutionalized among the practitioners interviewed for this study.

There are clear indications that benchmarking among the contractors and consulting engineers has obtained institutional legitimacy on a local level in building projects, as a normalizing governing technology, that induces that contractors and consulting engineers are adjusting their products and services to an expectation of clients' use of KPIs when selecting collaborators in future building projects. The interviews reflect that benchmarking creates incentives for construction companies to improve building products and services in their striving for good KPIs. However, the KPIs on defects and work accidents in the contractor benchmarking system are highly questioned by the contractors interviewed for this study. If the interviews represent a general perception among contractors, the KPIs are likely to constitute the foundation for future political struggles. If benchmarking is to be institutionalized further among contractors, it seems prudent to design the KPIs in ways that can support these local effects of benchmarking and ultimately improve the performances in building projects.

The interviews also reveal how the three clients interpreted benchmarking differently and that there is a clear discrepancy between construction companies' interpretation of benchmarking and the clients' interpretations of benchmarking. Two of the clients exclusively regarded benchmarking as a selection tool for clients to select collaborators from, and thus not considering the effects benchmarking engenders on the individual building project as construction companies conform their products and services to the KPIs in the benchmarking system. Accordingly, the interviews indicate that the people interviewed for this study have diverse interpretations of the instrumental purposes and overall objectives for benchmarking.

Contrary to the two other clients, the client from the social housing sector revealed an insight into benchmarking as a normalizing governing technology in line with the interpretations identified among the contractors and consulting engineers. The client did not, however, utilize or support this interpretation in practice by actively utilizing benchmarking to create incentives for construction companies to pursue good KPIs. He indicated that a more consistent and transparent utilization of benchmarking in the prequalification could create greater incentives for the construction companies to conform to benchmarking as a normalizing governing technology but did not personally contribute to this development.

5 DISCUSSIONS AND CONCLUSIONS

Throughout this study I have accounted for how a thorough understanding of the benchmarking initiative must be understood through the historical development the institution has undergone. I have done so by unfolding the development of benchmarking through an analytical framework based on contemporary institutional theory. In this way, I have made extensive use of the concept of “framings” to describe how actors’ political engagement in the institutionalization of benchmarking can be understood as exploitations contradictions in the institutionalization and constructions of diagnostic, prognostic, and motivational framings. The concept of framings has helped me manage and unfold the political struggles between actors, and I have demonstrated how the three types of framings provide insight into how political positions can be understood and how they can help understand the political struggles and negotiations that take place during institutionalization of new structures. The study has revealed how actors have created and exploited diagnostic framings of the Danish construction industry to delegitimize existing arrangements and provide openings for institutional change and introducing new structures. The diagnostic framings have been accompanied by alternative arrangements that the actors are seeking to introduce through the prognostic framing. The prognostic framings accordingly have been functioning as the solution to the diagnostic framing and reflecting what is considered as alternative structures to existing institutions. The prognostic framings have simultaneously created the foundation for motivating actors to engage and support the new structures. These motivations have been communicated in ways so that the new structures could attain institutional legitimacy from potential allies. This has been done more explicitly through the motivational framing, which has shown to be an important strategic element in political struggles.

By means of the analytical framework, this study has accordingly accounted for the formation processes and phases of consolidation that have strengthened, transformed, threatened, and constituted the institutionalization of benchmarking. With a point of departure in my three research questions, this chapter concludes and discusses the institutionalization of benchmarking in the Danish construction industry.

5.1 HOW AND FOR WHAT PURPOSES HAS BENCHMARKING ORIGINALLY BEEN INTRODUCED AS A SOLUTION TO POLITICAL ISSUES IN THE DANISH CONSTRUCTION INDUSTRY?

An inevitable element in a study of institutionalization is to understand the foundation from which the institution originally arose. Institutions do not emerge from nothing but find their legitimacy from an institutional context. This first research question seeks to cover the institutional context from which benchmarking originated and how benchmarking was considered to be a legitimate construction political initiative in the Danish construction industry. The research question accordingly addresses how the institutional environment of the construction policy provided a foundation from which benchmarking should find legitimacy.

In my thesis, I have accounted for how benchmarking originated from changes in the political climate that started in the late 1960s and positioned quality and productivity high on the construction political agenda. Openings for introducing benchmarking were created, as the institutional environment for developing the construction policy was changing through the 1990s. The changes were caused by an establishment of a diagnostic framing, characterizing the Danish construction industry as insufficient in competing in an international market. The broad political acceptance of this diagnostic framing entailed an institutional environment of the development of the construction policy that was highly influenced by the inclusion of the Agency for Trade and Industry and private actors. Accordingly, political development programs that unfolded during the 1990s were conducted in a close collaboration between public and private actors. This collaboration was accordingly based on a mutual interest of addressing the issue of competing internationally, and the future development initiatives were to be constructed in this newly established political environment, as joint collaboration between all actors of the construction industry became dominating throughout the 1990s.

The construction political activities of the 1990s resulted in a series of development programs that objectified the construction industry as an important economical national resource area that was pressured by foreign competition and needed to be made more competitive through strategic development initiatives. The construction industry was to a greater extent than previously considered to be of great economical importance for society.

A persistent political ambition was to change the competition in the construction industry towards quality performance instead of price exclusively. The changes of the political climate called for clients, both private and public, to act as change agents and to become the driving forces in the creation of institutional changes. The lack of demand-driven development of the construction industry was accordingly a central diagnostic framing that had to be addressed, and clients needed to be better equipped in articulating their demands and choosing the best collaborators. Through the 1990s clients were being articulated as key elements in generating changes that could drive the construction industry towards a closer and more efficient collaboration and interplay between the public sector, the construction companies, and the clients. The conception was that the competitive position of the construction industry would be enhanced as clients provided economical incentives for contractors, architects, consulting engineers, and suppliers to initiate changes by placing qualified demands on the quality of the buildings.

Benchmarking was introduced as a possible solution to address the problems of the Danish construction industry in an international market. Benchmarking accordingly gained its legitimacy from changes in the political climate, as it became a necessity to construct a prognostic framing that could provide transparency of the products and services of the market and qualify clients in making demands to the private companies. Benchmarking was subsequently suggested as a key element in the construction political Task Force of 2000 and widely incorporated in one of the development programs, Project House. Benchmarking was presented as a technology that could: qualify clients in their new position as demanding costumers, regulate the market, create a better transparency of the products and services from construction companies, and provide construction companies with a statistical foundation for attaining insight into their own and competitors performances.

5.2 HOW HAVE POLITICAL STRUGGLES AND NEGOTIATIONS AFFECTED THE INSTITUTIONALIZATION OF BENCHMARKING?

This study has supported the contemporary literature in institutional theory on actors' important role in institutional change processes. The case study has clearly demonstrated how the institutionalization of benchmarking has been a result of the interactions between actors with political interests in the institutionalization, and how benchmarking has entailed an arena of political struggles and negotiations between actors who have been politically motivated to influence and transform benchmarking.

The institutionalization of benchmarking has revealed an institutional transformation of benchmarking from being strictly regulatory disseminated to being normatively accepted as the institutionalization was politically negotiated and mutually accepted and has ended up having effects in a more or less cultural-cognitive conception among practitioners in the construction industry. This indicates that, despite a transformation from the original political intentions for benchmarking, the political struggles and negotiations have resulted in an increased institutionalization of benchmarking.

Throughout the historical development of benchmarking, different actors with diverse interests in benchmarking have shown to be capable of creating radical transformations of benchmarking's instrumental purposes and overall objectives. The study accordingly supports and contributes to the contemporary literature on actors and agency by revealing how new institutions are exposed to political struggles as actors see prospects for strengthening their interests. Further, the study reveals how the institutionalization is shaped by political negotiations, as new alliances between political actors are made and create new coalitions of interests that constitute an institutional pressure to transform the institutionalization. Actors have shown to be the focal point in the institutionalization of benchmarking. By exploiting contradictions within the institutionalization of benchmarking, they have strategically constructed new prognostic and motivational framings that could challenge those not in their political interests, and in this way, cause a continuous transformation of benchmarking. Even though the following quotation has already been presented in the theory, it seems appropriate to bring it up once again, as it elegantly captures a central point in this study of the institutionalization of benchmarking:

“For institutionalization to occur successfully and for adaptation to take place—never linearly, but always with a certain degree of unpredictability—change must pass through various levels (macro and micro) and must involve different types of actors (supranational, national, sub-national, local, etc.)” (Lippi, 2000:459).

With this quotation in mind, I will briefly account for how actors have engaged in political struggles that have influenced the institutionalization of benchmarking and transformed the initiative into something much different than its original design. After this historical account, I will discuss on a more general level how benchmarking is a social construction and a result of actors’ political engagement in the institutionalization.

As it became evident that benchmarking was to be a central element in the construction policy, actors engaged in the institutionalization with the aim of attaining influence on the initiative. By propounding different and even divergent prognostic framings of benchmarking, actors attempted to destabilize prevalent instrumental purposes and overall objectives for benchmarking in order to advance their political interests in the initiative.

The application of the analytical framework on the many identified ambitions for benchmarking and the wide incorporation of benchmarking in the construction political activities, clarified that benchmarking relied on broad and incoherent prognostic framings. All prognostic framings had an anchoring in the ambition of creating more transparency in the construction industry, but the unclear identity and many political ambitions for benchmarking led to early ambiguities and diverse interpretations of the new technology on this early state of its development. The analysis demonstrated that benchmarking was originally articulated through three incoherent prognostic framings seeking to address a broad diagnostic framing of the construction industry as lacking international competitiveness. Briefly summarized, benchmarking was characterized as three independent prognostic framings: Firstly, benchmarking was articulated as a “normalizing governing technology” that functioned as a tool for clients to qualify their selection of collaborators. This prognostic framing reflects underlying interest of utilizing benchmarking to exercise regulative power to those construction companies who are underperforming according to the established success criteria. The intention was that the production of new “market standards” would cause the private market to conform to the performance criteria.

Secondly, benchmarking was articulated as a “socially constructive technology”, reflecting benchmarking in a prognostic framing, where the ambitions were to gain insight into performances areas of the construction industry. Societal gains were expected in the form of more qualified demands to construction companies and more qualified basis for political decisions.

Thirdly, benchmarking was articulated as a “reflective development technology”, with the ambition of identifying and communicating best practices in the construction industry and in this was create a learning platform from which construction companies could be inspired to share knowledge on how to improve services and product through benchmarking activities. An overview over the three prognostic framings of benchmarking are provided below on table 6. The table shows how each of the three prognostic framings of benchmarking are responses to 1. Different diagnostic framings, reflecting the problem benchmarking are considered to address. 2. The institutional pillars the prognostic framings are basing their institutional legitimacy on (these being regulative, normative or cultural-cognitive). 3. The expected utilization of the KPIs produced from benchmarking. 4. And finally the expected benefits from each of the prognostic framings.

	Prognostic framing		
	Benchmarking as socially constructive technology	Benchmarking as normalizing governing technology	Benchmarking as reflective development technology
Response to diagnostic framing	<i>Lacking transparency and knowledge of the performance of the construction industry</i>	<i>Inexpedient competition on price; clients are not utilizing their influences in developing the construction industry</i>	<i>Companies are not sufficiently motivated initiating changes of the product and services</i>
Institutional pillar	<i>Normative</i>	<i>Regulative</i>	<i>Cultural-cognitive</i>
Utilization	<i>Judgment and decision-oriented</i>	<i>Judgment-oriented</i>	<i>Improvement-oriented</i>
Expected benefits	<i>Provides basis for political decisions, explicit success criteria, target setting and overall performance development</i>	<i>Provides basis for selection of companies, regulates, controls, monitors</i>	<i>Provides learning of best practices, mutual benefits to participants, continuous improvement of processes</i>

Table 6: Overview of the three prognostic framings of benchmarking

It is argued that the many prognostic framings of benchmarking from the two development programs, the Task Force and Project House, constituted a broad motivational framing that in different ways appealed to a wide range of actors with different political and strategic interests

in the benchmarking initiative. The motivational framing secured political acceptance from people who engaged in the development activities of Project House. The prognostic framings of benchmarking were by no means unambiguous and thus attempted to incorporate many different interests. As a result, benchmarking was articulated in ways that could cope broadly with the diagnostic framing of the construction industry as lacking international competitiveness and simultaneously include many different interests. These indefinite instrumental purposes and overall objectives for benchmarking would show to provide openings for future political struggles as the coexisting prognostic framings of benchmarking permitted actors to both engage in the development of benchmarking with different purposes and also possibilities to exploit contradictions of the benchmarking initiative.

The first political struggle occurred in 2001 as private actors in attained ownership of the Evaluation Centre, suggested in the Task Force report and Project House. The preliminary, but yet unclear, prognostic framings of benchmarking were considered to be of sufficient political interest to prompt these private actors to attain control over the centre, which was nominated as a central place from which benchmarking was to be concretized and operated from. The Task Force report and Project House had accordingly succeeded in articulating the Evaluation Centre and benchmarking as important elements in the future development activities of the construction industry. This made the centre attractive for private actors to engage in and attain ownership of. The motive for establishing BEC on private hands was bilateral, as an official announcement articulated this private initiative as the construction industry's reaction to the productivity and quality criticism during the past eight years, but other underlying motives were present, as indications pointed out that the establishment of BEC had a basis in a widespread skepticism among private actors of a ministerial determination and development of the activities of the Evaluation Centre. The reaction from private actors was accordingly reflective of political and strategic considerations of attaining control of the new structures that were to be propounded through benchmarking.

The successful establishment of the Evaluation Centre on private actors' hand was the first demonstration of how the inclusion of private actors in the political development activities of the construction industry had facilitated new possibilities for the private market to have a legitimate co-ownership and contributory influence on the development and formulation of the construction political initiatives, including benchmarking. The political motives for establishing

the Benchmark Centre for the Danish Construction Sector (da. Byggeriets Evaluerings Center, BEC) did not at first cause a radical transformation in benchmarking, as it was evident that BEC adopted the incoherent coexisting prognostic framings of benchmarking from the Task Force report and Project House. It was emphasized by the stakeholders that the centre was reliant on a common recognition of the centre as a legitimate development place for a future benchmarking system and that the centre had to be independent of private interests, these being company groups, professional associations, companies, or the state. In this way, despite the private actors' engagement in the centre, BEC was intended to be provided an independent political position from which benchmarking was to be developed and operated from. The political position of BEC was further strengthened as the closure of the strong Ministry of Housing in 2001 entailed that the construction policy was to be formulated primarily by the far more market- and competition-oriented Agency for Trade and Industry in the newly established Danish Enterprise and Housing Authority (da. Erhvervs- og Boligstyrelsen—later Erhvervs- og Bygningsstyrelsen, EBST) under the Ministry of Trade and Industry. The Agency for Trade and Industry had already, in the 1990s, revealed an interest in including private actors in the construction political activities and emphasized BEC as a successful example of a joint partnership between public and private actors and in this way proved that BEC could occupy a legitimate central political position in the construction industry. These changes in the political climate accordingly provided BEC with a possibility to exploit the deconstruction of the existing construction political environment and legitimize the centre's ambitions of making benchmarking an important political element in future construction political development activities.

The entrance of EBST in the development of benchmarking strengthened one of the prognostic framings of benchmarking, hence entailing that the coexisting prognostic framings were no longer considered equally in the institutionalization. In collaboration, BEC and EBST attempted to drive the institutionalization towards an interpretation of benchmarking as a normalizing governing technology that, through publication of KPIs and utilization of benchmarking as a selection tool for clients, could generate a more transparent and competitive market. By making benchmarking a legislative requirement and facilitating the political position of BEC, these two actors attempted to attain ownership of the institutionalization of benchmarking. This initial reconfiguration of benchmarking revealed how EBST and BEC utilized their social positions in the construction industry and consolidated interests in order to

construct a more coherent and uniform interpretation of benchmarking—and simultaneously deprioritizing other actors' political ambitions in favor of this regulative dissemination strategy. The basis for the future institutionalization of benchmarking was accordingly based on a coercive production and utilization of KPIs in state building projects. In the following years BEC's communication strategy reflected this regulatory dissemination of benchmarking by attempting to construct a common perception among contractors that KPIs were a necessity in order to bid on state building projects and, in this way, communicated benchmarking as a regulative incentive for contractors.

After the effectuation of the legislative dissemination of benchmarking, the social housing sector was included in the benchmarking initiative. This inclusion of the social housing sector was a clear and traditional prerequisite for disseminating construction political activities to the construction industry, as the social housing sector embraced many more building activities than initiated by state clients. The inclusion of the social housing sector entailed that benchmarking got an even higher degree of legitimacy for the prognostic framing of benchmarking as a normalizing governing technology, as this was also in the interests of the actors from the social housing sector.

The attempts to institutionalize benchmarking as a normalizing governing technology was, however, not without implications, as several actors were not supportive of this increasingly common perception of benchmarking as a purely regulatory initiative that had the ambition of coercing private companies to conduct benchmarking and qualify clients in their selection of collaborators. The private companies and their professional associations accordingly exploited that clients were not using benchmarking in their prequalifications and that the benchmarking initiative was not providing sufficient value for money for the private companies. In this way, these actors attempted to destabilize one of the central foundations the regulative dissemination strategy relied upon for its institutional legitimacy. The contractors used their political influence by forcing their professional associations to raise their critique areas towards BEC and the authorities. Whereas the suggested benchmarking initiative had until now been officially supported by the board of directors in BEC for the purpose of propounding BEC and benchmarking as a legitimate private initiatives, the board members of BEC began to reveal diverging prognostic framings of benchmarking, as the initiative was attempted to be concretized around a more specified regulative orientation. The objection from contractors

drove the professional associations of BEC's board of directors to carry their member interests into the discussions of the strategic orientation of BEC, entailing a contradiction between the ambition of sustaining BEC as independent of private interests and simultaneously representing the mutually agreed upon interests of the construction industry.

These accusations of clients' lacking utilization of KPIs induced that the Danish Association for Construction Clients chose to support the authorities and BEC in the political struggle by expressing their interests in using benchmarking as a selection tool in the prequalification. It became evident that political struggles and consolidation of actors emerged as opposing interests in benchmarking became present. The diverse interests in the institutionalization revealed how actors were consolidating their interests and creating two strong political oppositions in order to be in as strong a position as possible to attain influence on the institutionalization.

The opposition against BEC, the Danish Association for Construction Clients, and the authorities got its momentum as consulting engineers and architects were prospected to be subjected to the benchmarking initiative. Again actors from architectural and consulting engineering companies facilitated their political influence by bringing their requirements and criticism into the board of BEC through their respective professional associations. The mobilized political forces against the prognostic framing of benchmarking, constructed by BEC and supported by the Danish Association for Construction Clients and the authorities, threatened the platform from which benchmarking had until now based its legitimacy and political orientation on. Member companies forced the five associations in BEC's board of directors to achieve influence on the development and forming of benchmarking in order to reconfigure the prognostic framings in ways that were, to a greater extent, considering the interests of contractors, consulting engineers, and architects.

The political struggles reflected awareness that this regulative function of benchmarking as a transparency generating selection tool for clients could only obtain legitimacy through the normative acceptance of this exercise of regulating power. As the functionality and legitimacy of benchmarking relied on support from private construction companies, it was revealed how these actors had the ability to influence the institutionalization of benchmarking and thus became important actors who needed to be taken into account in order to sustain an institutionalization of benchmarking in the construction industry.

The private companies and the professional associations successfully destabilized the institutionalization of benchmarking and clearly demonstrated the political forces they were able to mobilize. In order to achieve the needed influence on the future institutionalization, it was necessary to provide alternative prognostic framings that could delegitimize the framings being challenged and simultaneously mobilize sufficient support from other powerful actors by providing a motivational framing that all could subscribe themselves into.

The political pressure from the professional associations and construction companies resulted in a replacement of the management in BEC and prompted that BEC was now to be less political and more market-oriented in their strategy of communicating and disseminating benchmarking. Additionally, the benchmarking system was highly reduced at the expense of a prognostic framing of benchmarking as a socially constructive technology that could generate overall insight into the development of the construction industry in favor of a more operational and accepted system among private companies.

A simplification of the benchmarking system and a rising request for benchmarking took place and opened up the possibility for other actors to engage in the benchmarking activities, which resulted in an emergence of two new benchmarking operators. These two benchmarking operators promoted benchmarking differently than BEC, which once again resulted in coexisting prognostic framings and implications of disseminating benchmarking as a coherent development initiative for the construction industry.

As a result of the existence of three benchmarking operators with different interests in and perceptions of benchmarking, the private companies were provided an even more decisive role in the institutionalization since their choice of benchmarking operator would strengthen the prognostic framings promoted by the benchmarking operator of choice. Since benchmarking has found a politically accepted configuration among the professional associations and the authorities, these interpretations of benchmarking that are likely to impact the future institutionalization are to be found among the practitioners (contractors, consulting engineers, architects, and clients). Therefore the final chapter of the analysis uncovers how (a sample of) these actors interpret and conform to the contemporary benchmarking institution.

The above exposition of contractors', consultant engineers', and clients' interpretation and normative conformity to benchmarking have uncovered important insight into how benchmarking seems to be institutionalized among the practitioners interviewed for this study.

There are clear indications that benchmarking, among the contractors and consulting engineers, has obtained institutional legitimacy on a local level in building projects, as a normalizing governing technology that induces that contractors and consulting engineers to adjust their products and services to an expectation of clients' use of KPIs when selecting collaborators in future building projects. The analysis reflects that benchmarking creates incentives for construction companies to improve building products and services in their striving for good KPIs. However, the KPIs on defects and work accidents in the contractor benchmarking system are highly questioned by the contractors interviewed for this study. If the interviews are representing a general perception among contractors, the KPIs are likely to constitute the foundation for future political struggles. If benchmarking is to be institutionalized further among contractors, it seems prudent to design the KPIs in ways that can support these local effects of benchmarking and ultimately improve the performances in building projects.

The interviews also reveal how three clients interpreted benchmarking differently and that there is a clear discrepancy between construction companies' interpretation of benchmarking and the clients' interpretations of benchmarking. Two of the clients exclusively regarded benchmarking as a selection tool for clients to select collaborators from and thus did not consider the effects benchmarking engender on the individual building project as construction companies conform their products and services to the KPIs in the benchmarking system. Accordingly, the interviews indicate that the people interviewed for this study have diverse interpretations of the instrumental purposes and overall objectives for benchmarking.

Contrary to the two other clients, the client from the social housing sector revealed an insight into benchmarking as a normalizing governing technology in line with the interpretations identified among the contractors and consulting engineers. The client did, however, not utilize or support this interpretation in practice by actively utilizing benchmarking to create incentives for construction companies to pursue good KPIs. He indicated that a more consistent and transparent utilization of benchmarking in the prequalification could create higher incentives for the construction companies to conform to benchmarking as a normalizing governing technology but did not personally contribute to this development.

The study indicates that benchmarking today has found its pragmatic legitimacy from a mutually accepted political motivation to change the competition from price to quality. This motivation has been present since the initial ambitions for benchmarking and has survived the full range of political struggles and negotiation. This overall objective has shown to be persistently supported by all actors from the micro level to the macro level. The final chapter of the analysis indicates that benchmarking has gained acceptance among construction companies as a normalizing governing technology. The interviews with contractors and consulting engineers indicate an interest in improving their performances in building projects and that it is within the political objective of changing the competition in construction from price to quality that causes contractors and consulting engineers to conform to benchmarking by adjusting their strategies, products, and services with the aim of attaining good KPIs. These conformities to the institution are exclusively based on the companies' interpretation of potential sanctions that insufficient KPIs could entail. The effects of the benchmarking institution and its ability to generate changes on the local building project is accordingly still highly reliant on the executive orders and the dissemination of benchmarking as selection tool for clients. Without such driving forces, the legitimate and politically negotiated platform for benchmarking would erode, as the incentives for construction companies to pursue good KPIs would become absent.

The case study shows how prognostic framings, over time, have been constructed and strengthened or deconstructed and weakened by actors with political interests in attaining influence on the instrumental purposes and objectives of benchmarking. Actors' abilities to exploit contradictions within the benchmarking institution and propound legitimate visions have shown to be the most important factors in orientating the institutionalization. The review of the historical development of benchmarking reveals how the institutionalization has not been stable but instead characterized and shaped by politically motivated actors who have attempted to facilitate the multiple interpretations and political ambitions for benchmarking from the Task Force and Project House. The original broad motivational framing from these two development programs showed that benchmarking was a carrier of contradictions, and the coexisting prognostic framings created opportunities for agency, thus political struggles and negotiations, as the prognostic framings generated contradictions that provided actors openings of generating changes of the institutionalization. As actors have been exposed to the contradictions between the instrumental purposes and objectives represented by the coexisting prognostic framings, they have engaged in and accomplished transformations of the institutionalization. The

development of benchmarking has been a result of the political interests that have emerged throughout the institutionalization, and the case study shows that these interests have been generated concurrently with the establishment of the benchmarking institution. The interests of political motivated actors that have affected the institutionalization have accordingly been neither stable nor always present; new interests have emerged concurrently with actors have perceived that the benchmarking institution has counteracted their political interests. In this continuous production of political interests benchmarking has transformed, as actors have strategically exploited the contradictions of benchmarking with the aim of creating sufficient political pressure and transformed the institutionalization in the direction of the most influential actors. The institutionalization of benchmarking has accordingly been shaped by political struggles and negotiations between actors in the construction industry, which have resulted in transformations of benchmarking from being an institution that was carrier of many different political aims for the construction industry to an initiative that has much more concrete and defined objectives. In this way, the institutionalization of benchmarking is best described as a consolidation of the interests of those actors who have been most successful in forcing through their political interests. Their success in the political negotiations has shown to be contingent on the actors' ability to construct alternative prognostic framings of benchmarking and through these formulate new and more politically powerful or appealing motivational framings for the institutionalization of benchmarking. The result is that benchmarking is transformed into an institution that represents an accommodation of the strongest political orientations, which do not fulfill the original intentions but meet the demands that could be agreed upon by the politically motivated actors throughout its institutionalization.

This study has unfolded how benchmarking has caused strategic activities and political struggles as tensions and contradictory interests have prompted actors to become reflective of the structures they were prospecting to be subjected to by the rising institution. The institutionalization has been a highly political process and has over time been characterized by: 1) periods of political attempts to generate stability; 2) periods of political intervention by actors with strategic interests in destabilizing the institutionalization; and 3) periods of consolidation. As a result of this political process, benchmarking has transformed radically from its original design, and is still struggling with diverse interpretations of the overall ambitions for the change agenda it seeks to address.

The analysis has accounted for how actors have played a vital role in the institutionalization of benchmarking and how they do not only reproduce structures but also how they become reflective of their institutional environment and have the possibility to change the structures they are subjected to. The case study reveals that, when actors have experienced contradictions between the structures being institutionalized and their political interests, they have critically interpreted the motivational and prognostic framings of benchmarking, with the purpose of identifying contradictions within the benchmarking institution. In this way, it is shown how actors have facilitated their social positions to either support the institutionalization by reproducing the structures of benchmarking or obstruct the critical reproduction of benchmarking by propounding alternative orientations for benchmarking and, in this way, threaten the political platform from which benchmarking finds its institutional legitimacy.

However, the case study reveals that even though the actors who have attempted to influence the institutionalization have shown to be reflective individuals that interpret their institutional environment and initiate political struggles, the changes of the institutionalization are not necessarily commensurable with the intentions of the political struggles. This indicates the highly complex political processes of institutionalization, as the institutionalization is never linear or reflective of a single actor's interests. Institutions are, when all comes to all, political constructions that are always open for political struggles and, accordingly, transformations or even closure.

The case study has shown how the institutionalization of benchmarking has taken the form of a series of political struggles and negotiations, where actors have attempted to attain influence and ownership. During its lifespan, benchmarking has been a highly political topic and has mobilized many actors with political interests in attaining influence on the institutionalization. The inclusion of many actors in the institutionalization has resulted in a high degree of pragmatism where benchmarking has never been stable. Instead, benchmarking has emerged from a foundation of an inconsistent design of its instrumental purposes and overall objectives, where the development and forming of benchmarking has been very flexible and open for interpretations. This case study may most importantly conclude that benchmarking has found its legitimacy through political negotiations. It is these negotiations that create and brings identity and legitimacy to new institutions; however, the case study is an imminent example of how benchmarking is not formed in ways that meet or represent the interests of a single actor or

group of actors but rather is a result of where benchmarking most effectively could find its pragmatic legitimacy.

Many of the original intentions for the instrumental purposes and objectives for benchmarking have been neglected in the contemporary political struggles, which reveal how the interactions between actors with political interests in benchmarking have been institutionalized. Benchmarking has developed in an orientation, where the political struggles are no longer reflecting a questioning of the legitimacy for the existence of benchmarking but instead the struggles of defining and forming its prognostic framing. This indicates that benchmarking has successfully constructed social relations between actors to an extent where the political outset for benchmarking is no longer an issue. Even though benchmarking is yet not unambiguous and unchallenged, benchmarking has entailed sedimentation of the political social relations that have been produced due to benchmarking. This indicates a normalization of the politically constructed institutional environment, where the interactions and negotiations between the actors have been settled.

The professional associations have, throughout the case study, shown to be of great importance for the institutionalization of benchmarking. With their capacity to collectively represent a profession professional associations have acted as powerful actors in providing political support or oppositions to the institutionalization. They have acted authoritatively in political struggles, and the study illuminates how professional associations have been provided a strong political position (and facilitated this position in the institutionalization), partly prompted by the changes in the political climate towards inclusion of these associations in political development activities, and partly prompted by establishing BEC on private hands. In this way, professional associations, BEC, and the authorities have acted as equal actors in negotiating, shaping, and redefining the social construction of benchmarking. The associations have, throughout the institutionalization of benchmarking, shown capable of constructing opposing prognostic and motivational framings that could resonate with the interests of potential allies and, in this way, destabilize the institutionalization in such proportions that entailed that both BEC, the Danish Association for Construction Clients, and the authorities were forced to reconstruct the institutionalization in order to achieve a sufficient degree of legitimacy of benchmarking as development initiative. In order for benchmarking to take on the required

degree of legitimacy, it has been a political struggle to determine the instrumental purposes and overall objectives for benchmarking.

The institutionalization of benchmarking has taken place as a learning mechanism, where benchmarking was originally introduced as a carrier of multiple political ambitions and objectives. But as actors have become conscious about its political and practical implications the institutionalization began to be influenced by political interest and the institutionalization began to slide into a more reflective phase. The case study (and the contemporary institutional theory) tells us that institutionalizations of new structures are highly political and can therefore have indefinite courses of development that cannot be captured and controlled by the political origins that laid the foundation to their creation. The establishment and political objectives for new institutions are accordingly only to be perceived as the initiation of institutionalization processes and new institutions and not as a rational design that reflects the institution in its negotiated form. Institutionalization processes are therefore best understood as politically conditioned courses of developments of new institutions and the result of sometimes difficult political choices between different legitimate orientations of the institutionalization. When all comes to all, institutionalizations of new structures are formed by political struggles and negotiations that entail the inclusion and institutionalization of some prognostic framings and exclusion or suppression of others. In this way institutions cannot be reduced to individual political requirements or objectives, but must instead be understood as the negotiated result from which the institution has achieved the highest pragmatic legitimacy and, accordingly, its highest attainable degree of institutionalization.

5.3 HOW HAS THE STUDY CONTRIBUTED WITH RECOMMENDATIONS ON HOW TO INSTITUTIONALIZE NEW STRUCTURES IN THE DANISH CONSTRUCTION INDUSTRY?

The institutionalization of benchmarking has shown to be a good example of the mechanisms that unfold when attempting to institutionalize a political initiative in the Danish construction industry. From the findings of the case study, this research question seeks to provide recommendations on how to institutionalize new structures in the Danish construction industry. It will be discussed how the institutionalization of benchmarking can contribute to general insight into how construction political development initiatives are shaped in negotiations

between actors with contributory influence in the development of the construction industry. In this way, this research question discusses how the means-end relationships of rising institutions are transforming as a consequence of the interplay between political motivated actors in the Danish construction industry.

The three coexisting prognostic framings of benchmarking have been the root to several political struggles and negotiations and have been the foundation to transformations of the benchmarking initiative. It has shown to be a persistent dilemma for the institutionalization that benchmarking has been attempted to be institutionalized as a technology that could accommodate all three prognostic framings, which have caused difficulties in constructing a stable and common interpretation of benchmarking. The original design constituted a wide institutional framework under which the institutionalization of benchmarking has unfolded.

The transformations of benchmarking can be regarded as actors' political successes and failures, and an obvious (and easy) conclusion is to point out how the institutionalization of benchmarking has been problematic because of the ambiguities in the original design; many of the political struggles that have unfolded over time could have been avoided with a more coherent and strict design. If the contemporary benchmarking institution is compared to the original ambitions for benchmarking in the Task Force, Project House, and original expectations in BEC, it is a legitimate conclusion that the institutionalization has failed and not achieved its original instrumental purposes and overall objectives.

But does it make sense to assess an institution on such success criteria? My answer is "no." It would be incorrect to conclude that the development of benchmarking is a political failure because of the compromising of the original political ambitions. The benchmarking institution that exists today is simply the result of reflective and politically motivated actors' interpretations of the institutional purposes that benchmarking most profitably can fulfill. The benchmarking institution reflects the results of the political compromises that have been necessary to secure and maintain a continuous strengthening of the institutionalization, and the requirements for institutionalizing benchmarking in the Danish construction industry have been radical transformations of the initiative. Yes, benchmarking has changed radically, and yes, the benchmarking initiative has lost some of its original ambitions. But this is a consequence of the reality under which benchmarking has unfolded and the conditions under which new institutions are to be developed in the Danish construction industry. I therefore choose not to be

critical of inclusion of private actors and the resulting institutional environment of the construction industry, nor do I choose to present conclusions on how the original design of benchmarking could have been constructed more appropriately. Instead, I find the greatest contribution to be concerning how this study can contribute to recommendations of how it is possible to politically navigate and design new institutions for the Danish construction industry. In the following, I will unfold how my recommendations are contradicting the above conclusion about the inexpediciencies of the original design of benchmarking by claiming that, with an ambition of institutionalizing benchmarking in the Danish construction industry, the ambiguities in the original design of benchmarking has shown to be a positive precondition.

I have demonstrated how the point of origin for the institutionalization of benchmarking has generated uncertainties of the instrumental purposes and overall objectives for benchmarking. Although nothing indicates that it has been an intentional political decision, the original design has facilitated benchmarking to be a carrier of a flexible political agenda that has provided possibilities for politically motivated actors to strategically engage and promote different institutional interpretations of benchmarking and thus negotiate how the institution is best shaped in order to gain support from the whole range of politically motivated actors engaged in the institutionalization. In this way, the institution has been adjusted to the political requirements of those actors who have been allocated a contributory influence in the institutionalization of benchmarking. The transformations of benchmarking must therefore be understood as a consequence of an institutionalization process that has had multiple, not necessarily consistent, political intentions. During the institutionalization, benchmarking has redefined political intentions and means-end relationships as the institution has adapted and responded to institutional pressures from the construction industry, and as a consequence, some of the initial intentions have been lost.

If we accept the theoretical view that institutionalization processes are highly political and changing over time, we simultaneously accept that institutionalizations are in constant risk of being challenged or rejected by politically motivated actors. With such preconditions for institutionalization processes, there is, as the case with this case study, always a risk of ending up with institutionalized structures that do not necessarily reflect the original political intentions for the institution. These uncertainties of institutionalization processes have shown to be particularly suitable for the Danish construction industry, as the institutional environment

for developing construction political activities consist of multiple actors who all provided a contributory influence on both the design and the institutionalization of new political institutions. In this way, institutionalization processes in the Danish construction industry are particularly exposed to political struggles, challenges, and rejections.

The study has shown how actors have become politically motivated and able to challenge and transform benchmarking but also that the actors have not been interested in or able to achieve a total abolishment of benchmarking as an institution in the construction industry. The transformations of benchmarking have occurred as new interests have emerged and as actors have enforced their political interests by strategically constructing alternative orientations of the institutionalization *within* the original design of benchmarking and the three prognostic framings that benchmarking was carrying. The relatively loose design from the Task Force and Project House, with unspecified and ambiguous means-end relationships, has accordingly both facilitated political struggles that may have been avoided but also shown to be setting a framework for the political struggles and negotiations unfolding during the institutionalization of benchmarking. The potential consequences of a more uncompromising political foundation for benchmarking and the risk of total rejection of the institution would have been greater, as opposing actors of the institutionalization would not be provided the same opportunity to construct and propound alternative interpretations of benchmarking from its original design to promote politically legitimate arguments for a reorientation. If benchmarking had been based on a detailed and less politically negotiable design, benchmarking would not be in as strong a position to regain political legitimacy by orientating the institutionalization towards alternative and politically negotiated solutions when the political pressures against the institutionalization became sufficiently strong.

Structures that are institutionalized with a vague or indefinite means-end relationship, due to a broad motivational framing and several (inconsistent) prognostic framings, will be much more robust to withstand political struggles and negotiations during the institutionalization. However, such structures will also automatically entail an increased risk for radical transformations, as actors are provided an explicit and politically constructed framework for navigating, framing, and expressing new and opposing political positions by propounding legitimate political arguments for a reorientation of the institutionalization. The practical consequences of such indefinite and politically negotiable foundations for institutionalization processes is that the

established institution will not necessarily reflect the initially intended political ambition, but in return, it will be in a form that represents the pragmatic legitimacy which actors participating in the institutionalization can agree upon. In this way, the institution has a greater possibility to gain the greatest possible institutional legitimacy, but of course, at the expense of a linear correspondence between original political objectives for the institution and its effects in its institutionalized and political negotiated form (a correspondence which theorists of contemporary institutional theory find illusive).

The study has shown that institutionalization is something that can change shape over time and develop in phases as new political interests emerge and actors become politically motivated to transform the institution. The issue is accordingly how to design new institutions that can cope with the construction political environment in the Danish construction industry and survive their institutionalization. The study indicates that, with an overall political aim of generating changes in the Danish construction industry by destabilizing existing institutions and providing openings for new institutions, it seems prudent to design new institutions to cope with transformations and political pressures. This is especially appropriate when dealing with a political environment such as the Danish construction industry, where new structures are difficult to institutionalize with a persistent end-means relationship. The question of whether new institutions for the construction industry ought to be loosely designed is accordingly not as relevant as the question of how institutions can be strategically designed to gain support from actors with political interests in the institutionalization process and provide a political framework for actors to negotiate the institutional form.

The answers to the first research question reveal how the construction political climate had been transformed from a ministerial initiation of change programs to a high degree of inclusion of private actors. The answers to the second research question reveal that this transformation in the construction political climate has generated implications for initiating and institutionalizing change agendas in the Danish construction industry. Institutionalizations processes in the Danish construction industry (and other organizational fields that count a high number of politically motivated actors in institutionalization processes) are not to be understood as something that is designed once and for all. Designers and carriers of new institutions in such fields can accordingly profitably consider institutionalization processes to be rather unpredictable and uncertain. In line with this recommendation, designers and carriers of new

institutions in the Danish construction industry must recognize, understand and treat institutionalization processes as conditioned of political processes where the development is contingent on the political struggles and negotiations that take place between politically motivated actors. This point is also highly relevant when understanding and preparing for the political counterstrategies that are likely to emerge during institutionalization processes. It is accordingly crucial that designers of political institutions for the Danish construction industry recognize that institutions are not given once and for all, and that political interests that can transform the rising institution are something that emerges and must be handled continuously in the institutionalization process.

But how is it possible to design an institution to cope with and benefit from these conditions?

First and foremost, the institution needs to be politically flexible in its instrumental purposes and objectives in order to survive radical transformations without losing its overall aim of generating changes in the organizational field it is implemented in. So instead of having a stable and predefined institution as the ultimate goal, the institution must be understood and designed as something that can retain connections to the overall change agenda and simultaneously handle political struggles and transformations. In order to secure that the established institution ultimately supports and generates desirable institutional changes, it is a requirement that all prognostic framings propounded in the original design are rooted in an overall change agenda and simultaneously sufficient wide and robust to attain institutional legitimacy from all actors with an interest in the institutionalization. Only in this way is it possible to ensure that the final politically negotiated institution, in the end, in some way address the change agenda that laid the basis for its establishment. The issue is accordingly to strategically design new institutions in ways that prepare the ground for an involvement of political actors and reflective development.

The above recommendation entails an increased focus on a new institution's ability to infiltrate the institutional environment and generate changes by challenging existing inexpedient institutions. However, designers of institutions need to be open-minded, reflective, and engaged in the institutionalization processes and less focus on measurable effects of the institution. The consequences of understanding institutionalization processes as something that is highly political and changes means-end relationships over time imply that the effects of institutions cannot be measured against some historically predefined political objectives. The effects of

new institutions are instead to be assessed on their ability to generate changes in institutionalized perceptions and behaviors in the organizational field they are implemented in and, further, the changes of political positions they give rise to.

In regards to benchmarking, carriers of the institutionalization (such as BEC and other politically motivated actors with an interest in shaping the institution) need to be highly conscious of how the institution is affecting and challenging existing institutional conditions. If an institution is not stable and is in a continuous transformation process, it is essential for carriers of rising institutions to be aware of how the institution is experienced and interpreted in the Danish construction industry in order to either strategically strengthen or weaken the prevalent orientation of the institutionalization. Since benchmarking has found a politically accepted configuration among the professional associations and the authorities, these experiences and interpretations of benchmarking that are likely to impact the future institutionalization are to be found among the practitioners (contractors, consulting engineers, architects, and clients).

Disseminating benchmarking as a normalizing governing technology that can generate desirable effects on a local building project level will make it relevant to bring the KPIs in the benchmarking systems up for discussion, as these no longer are intended to fulfill the wide range of political ambitions for benchmarking but are instead intended to support benchmarking as a normalizing governing technology that unfolds between clients and construction companies and meets clients' demands as a selection tool of collaborators.

Another recommendation is that carriers of the institutionalization of benchmarking can profitably strengthen their political interests by conducting analyses or creating learning forums that provide insight into practitioners' interpretations of benchmarking and how they conform to its structures in practice. Through such initiatives, carriers of the institutionalization will gain essential knowledge of the strengths and weaknesses of the institution and accordingly be provided with important insight into the openings for impacting the future institution. From such openings, they can strategically design new prognostic framings of benchmarking that can find the highest possible legitimacy among the strategically important practitioners in an appealing motivational framing.

Introductory in this paragraph I outlined that I would not be critical to the inclusion of private actors or the institutional environment for generating changes in the Danish construction industry through political development initiatives. My final recommendations are therefore on how future attempts to generate changes through political development initiatives can profit from a rethinking of roles and responsibilities of the actors involved in institutionalization processes in the Danish construction industry. The development of benchmarking demonstrates how private actors have pursued own interests in the institutionalization and created strong oppositions to actors insisting on benchmarking to develop in another direction. The political struggles and negotiations presented and analyzed in this thesis reflect discussions about benchmarking that to a high degree was disconnected from the original overall change agenda of increasing the transparency in construction. Such conditions for institutionalization processes are hindering an expedient development of new political initiatives since it entails an impending risk of ending up with institutionalized structures that are disconnected from the overall change agenda. It is therefore argued that if future political development initiatives are to continue the inclusion of private actors as participating actors in both the design and institutionalization, and simultaneously secure an expedient orientation of the institutionalization, private actors have to commit themselves to engage in political struggles and negotiations with a primary reference and respect to the change agenda, rather than attending to local interests of their member companies.

In the same way, as the private actors need to rethink their own role and display more responsibility to the overall change agenda, the authorities also need to reconsider how they are to exercise their power and facilitate their influence. The case study demonstrates a rather low involvement of the authorities in the political struggles and negotiations. The analysis shows that the authorities have influenced the institutionalization through the executive orders and the as mediator in political struggles. This conclusion is therefore not to be perceived as a characterization of the authorities as non-existing in the institutionalization of benchmarking. Instead this is a call for the authorities to be more reflective on their role in policy development in public-private collaborations in construction. Despite the opportunity to guide the institutionalization through the executive orders and clear declaration of interests, the authorities have to a great extend entrusted the private actors to orientate the institutionalization. In order to secure a well-balanced institutionalization considering both private and public actors' interests, the authorities ought to engage at least on equal terms in the

political struggles and negotiations that take place. This entails that the authorities, as other actors, have to articulate a clear vision for benchmarking. This study shows that the loosely expressions of interests from the authorities are being exploited in diverse ways by the benchmarking operators, without contradicting the executive orders. The case study also shows that the authorities are not expressing any interests in supporting or rejecting any of the orientations of the benchmarking operators. Therefore it is natural to emphasize the discrepancies between the powerful position of the authorities and their restraint of engaging in and formulating clear visions for benchmarking and the change agenda this political initiated development initiative is expected to address.

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7 APPENDIXES

7.1 APPENDIX A

LIST OF INTERVIEW PERSONS

Bent Frank, former director of Forsvarets Bygningstjeneste

Bent Madsen, director of BL – *Did not approve transcription and the interview has not been included in the thesis*

Christian Lerche, director of Danske Ark and board member of BEC

Curt Liliegreen, former director of BEC

Gunde Odgaard, director of BAT-kartellet and board member of BEC

Henrik Bang, director of Bygherreforeningen

Henrik Garver, director of F.R.I. and board member of BEC

Ib Steen Olsen, former Head of Division in By- og Boligministeriet and EBST

Jacob Ravn Thomsen, former chief consultant of Konstruktørforeningen

Jan Eske Schmidt, vice director of TEKNIQ

Jesper Rasmussen, former vice director of EBST

Jørgen Nue Møller, chairman of the board in BEC

Karsten Gullach, chief consultant in Ministeriet for By, Bolig og Landdistrikter

Lars Ole Hansen, chairman of the board in Bygherreforeningen and vice chairman of BEC

Michael H. Nielsen, vice director of Dansk Byggeri

Niels Haldor Bertelsen, senior researcher in SBI

Peter Hesdorf, director of BEC

Troels Støvring, consultant in Bülow Management

Anomized interviews:

Four contractors from different companies

Two directors of different consulting engineering companies

One director of a private client company

One director of from a social housing client company

One former director from a state construction client company

7.2 APPENDIX B

Byggematerialeindustrien - Danske Arkitektvirksomheder - Dansk Byggeri - Foreningen af Rådgivende Ingeniører

Økonomi- og erhvervsminister Bendt Bendtsen
Økonomi – og erhvervsministeriet
Slotsholmsgade 10 - 12
1216 København K

Socialminister og minister for ligestilling Eva Kjer Hansen
Socialministeriet
Holmens Kanal 22
1060 København K

København den 8. februar 2006

Kære Bendt Bendtsen og Eva Kjer Hansen!

Byggematerialeindustrien, Danske Arkitektvirksomheder, Dansk Byggeri og Foreningen af Rådgivende Ingeniører skriver dette til Jer, fordi der er opstået et problem, som involverer begge ministerier og som vækker bekymring i vore organisationer.

Sagens genstand er Socialministeriets arbejde med etablering af et nøgletalssystem for det almene boligbyggeri, hvor der til vores overraskelse er udsigt til, at Staten investerer i udbygning af det såkaldte BOSSINF system, så det – omkostningsfrit for virksomhederne - kan beregne nøgletal til virksomhederne. Dette vil påføre det private Byggeriets Evaluerings Center, som vi har stiftet på opfordring af Regeringen, livstruende konkurrence.

På opfordring fra regeringen blev Byggeriets Evaluerings Center stiftet i 2002 af en række erhvervsorganisationer og af Erhvervs- og Byggestyrelsen. Byggeriets Evaluerings Center blev stiftet som en privat virksomhed med det formål at udvikle og drive et nøgletalssystem for byggeriet, og centret har til dato været 100% privat finansieret. Centret indsamler oplysninger om byggeriets kvalitet og effektivitet.

Det nøgletalssystem, som centret har udviklet, ligger til grund for de krav om nøgletal i det statslige byggeri, der blev indført med Bekendtgørelse 1394 af 17. december 2004. Bekendtgørelsen kræver blandt andet, at virksomheder, der vil bygge for staten, fremlægger nøgletal om deres tidligere opgaver, hvad enten dette nu er statslige, private, kommunale eller almene byggesager. Centret indsamler disse nøgletal mod betaling fra virksomhederne, der finansierer en væsentlig del af centrets drift. Resten af centrets finansiering er skaffet gennem organisationer og fonde.

Socialministeriet overvejer nu at indføre krav om nøgletal i det almene boligbyggeri. Kravet indføres med en bekendtgørelse, der netop har været i høring hos organisationerne, og som forventes underskrevet en af de nærmeste dage.

Nøgletalssystemet bliver sammenfaldende med det system, der findes i dag. Vi bakker i organisationerne op om dette gode initiativ. Imidlertid vil den måde, som kravet indføres på, ramme Byggeriets Evaluerings Center og vanskeliggøre dets videreførelse.

Socialministeriet vil overlade indsamlingen af oplysninger til den enkelte almene bygherre, der herefter skal videregive disse tal til kommunerne. Disse skal igen indrapportere tallene gennem det såkaldte BOSSINF system, og dette system skal bruges til at beregne de færdige nøgletal. BOSSINF systemet skal omprogrammeres med henblik på at løse denne opgave.

I praksis vil Socialministeriets forslag påføre den private virksomhed, Byggeriets Evaluerings Center, ulige og unfair, statslig konkurrence. Dette bekymrer os, og vi finder det unødvendigt, at staten bevæger sig ind på dette område. Vi vil opfordre Jer til i fællesskab at finde en løsning, så Byggeriets Evaluerings Center ikke lider skade.

Når der indføres krav om nøgletal i det almene byggeri, vil nøgletallene herfra kunne anvendes af virksomhederne til at opnå prækvalifikation i det statslige byggeri. Nøgletallene ser ud til at blive stillet gratis til rådighed for virksomhederne. Dette gør det højst usandsynligt, at entreprenør- og håndværksvirksomhederne fremover frivilligt vil lægge private eller kommunale byggeopgaver ind til evaluering i Byggeriets Evaluerings Center mod betaling. I dag udgør de ikke-statslige byggeopgaver som nævnt knap 80% af centrets sager, og centret kan derfor blive hårdt ramt af Socialministeriets forslag.

Det er for os svært at forstå, såfremt staten vil påføre sig selv ekstraomkostninger til at opbygge en evalueringsfunktion i et ministerium, når der i dag eksisterer en privat virksomhed med bred opbakning i erhvervet, der udfører denne opgave på velfungerende vis.

Byggeriets Evaluerings Center er et eksempel på, at staten og organisationerne kan løse komplekse problemer, når man går sammen herom. Derfor vil det være uheldigt, hvis dette eksempel på samarbejde skades af et statsligt tiltag.

Vi vil gerne understrege, at denne henvendelse ikke må tages som udtryk for et ønske om at friholde Byggeriets Evaluerings Center for nogen form for konkurrence. Men hvis centret skal møde konkurrence, ønsker vi, at konkurrencen bliver fair og baseres på sunde, kommercielle vilkår. Det er vores indtryk, at regeringen deler dette syn på konkurrencespørgsmålet.

I organisationerne er vi overbeviste om, at det ikke kan være regeringens hensigt at skade evalueringsinitiativet, som det offentlige selv foreslog i den såkaldte task force redegørelse "Byggeriets Fremtid" fra december 2000, og som regeringen

Byggematerialeindustrien - Danske Arkitektvirksomheder - Dansk Byggeri - Foreningen af Rådgivende Ingeniører

siden flere gange har bakket op om. Organisationerne vil derfor anmode om, at der straks iværksættes en dialog, så der kan findes løsning på problemet til gavn for virksomhederne, og som kan tilgodese Byggeriets Evaluerings Center og samtidig spare offentlige midler. Med vort brev vil vi gerne sikre, at der ikke udstedes en bekendtgørelse på området, før alle forhold i denne problemstilling har været nøje overvejet, og at også erhvervets interesser er blevet hørt.

Med venlig hilsen

Christian Lerche
Direktør, Danske Arkitektvirksomheder

På vegne af:

Byggematerialeindustrien,
Danske Arkitektvirksomheder,
Dansk Byggeri og
Foreningen af Rådgivende Ingeniører

7.3 APPENDIX C

www.byggeevaluering.dk

Byggeriets Evaluerings Center



Benchmarking Danish Construction

**The Benchmark Centre for the
Danish Construction Sector**

July 2010

The Benchmark Centre for
the Danish Construction Sector
(BEC)

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COLOPHON

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Composition of the Directors Board of The Benchmark Centre for the Danish Construction Sector (BEC) at 1 July 2010:

Joergen Nue Moeller, Adj. Professor (Chairman)

Appointed by Realdania (www.realdania.dk)

Finn Lauritzen, Director (Deputy Chairman)

The National Agency for Enterprise and Construction (www.ebst.dk)

Henrik Garver, Managing Director

The Danish Association of Consulting Engineers (FRI) (www.frinet.dk)

Christian Lerche, Director

Danish Association of Architectural firms (DANSKE ARK) (www.danskeark.dk)

Elly Kjems Hove, Director

The Building Materials Industry (DI Byggematerialer) (www.bm.di.dk)

Lars Ole Hansen, Senior Consultant

The Danish Association of Construction Clients (Bygherreforeningen) (www.bygherreforeningen.dk)

Gunde Odgaard, Head of Secretariat

Cartel of Unions in the Building, Construction and Wood Sectors (BAT-kartellet) (www.batkartellet.dk)

Michael H. Nielsen, Director

The Danish Construction Association (Dansk Byggeri) (www.danskbyggeri.dk)

Niels Jørgen Hansen, Managing Director

Danish Mechanical and Electrical Contractors' Association (Tekniq) (www.tekniq.dk)

Frank Bundgaard, Division Chief

The Ministry of Social Affairs (Socialministeriet) (www.sm.dk)

BEC's Executive Board is made up of **Peter Hesdorf**, BSc. Construction Management

PREFACE

The concepts of benchmarking and Key Performance Indicators (KPIs) have been gaining ground in the construction sector, particularly in recent years. The EU Commission has carried out a Construction Benchmarking Pilot Study. In recent years, the UK, in particular, has taken the lead in Europe as far as concerns collecting KPIs for specific construction projects, initially through the Movement for Innovation (M4I) initiative, and subsequently through the organisation Constructing Excellence.

However, the development of a benchmarking system in Denmark has also attracted international attention.

Since 1 July 2005 Danish construction companies have had to present KPIs for previous projects, if they wish to undertake construction projects for the Danish State. The Benchmark Centre for the Danish Construction Sector (BEC) refers to this as the company's "Grade book".

BEC, a commercial nonprofit foundation established by a number of organizations representing the entire Danish construction sector, is behind the benchmarking system. The fact that the initiative has the backing of the ENTIRE construction sector is important to ensure understanding of the structure of the benchmarking system and acceptance by industry, which has meant rapid and comprehensive implementation at national level.

This document has been prepared with the specific aim of informing interested construction industry players in other countries of the unique benchmarking system in Denmark. The main target group for this document is foreign government officials and decision-makers. Other target groups are employees at research centers, in construction technology departments at universities, and in organizations and companies.

Precisely because the document is also addressed to the research and university world, several chapters are written in technical language, especially the last two chapters.

The purpose of this document is to disseminate knowledge of the Construction Benchmarking System, and BEC will be pleased to receive any feedback and enquiries at the following e-mail address: info@byggeevaluering.dk

July 2010

The Benchmark Centre for the Danish Construction Sector (BEC)

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BACKGROUND AND SUMMARY

The Danish construction industry and Danish construction companies have been the subject of severe criticism in public debate. This criticism has come from the Danish government as well as customers – i.e. clients and users.

The criticism in Denmark has not been unlike the criticism voiced in our neighboring countries such as Sweden, Norway and the UK. It has ranged from low growth in productivity through lack of transparency concerning the relationship between price and quality, restriction of competition, too many defects, dissatisfied customers, to unsatisfactory health and safety at the worksite resulting in too many accidents and fatalities.

In December 2000 the Danish Ministry of Housing and Urban Affairs and the Danish Agency for Trade and Industry embodied the criticism in the report "The Danish Construction Sector in the Future". The report also suggested various solutions, including the establishment of a Benchmark Centre for the Danish Construction Sector. The centre would be charged with enhancing transparency in the market by introducing a benchmarking system and would also undertake productivity studies.

In 2001 the players in the construction industry, including clients, contractors, consulting engineers, architects, employees, manufacturers of building materials and the Danish Government, decided to set up The Benchmark Centre for the Danish Construction Sector (BEC).

A private initiative

BEC was formed, exclusively from private funds, as a commercial nonprofit foundation with the following objects:

- to develop and operate a benchmarking system with Key Performance Indicators (KPIs) for the construction process as well as the finished building
- to develop benchmarking methods and practical vision objectives for productivity in construction
- to coordinate, evaluate and disseminate knowledge about development construction/construction
- to host network groups within the construction sector

In the course of 2002 and 2003 BEC developed a benchmarking system with particular focus on on-site activity and contractors and clients performance.

The purpose of the Construction Benchmarking System is:

- to enhance transparency in the market
- to enable the parties participating in the construction process to choose the best business partners
- to provide a basis that enables the individual client and company to benchmark themselves against others and to learn from best practice

In August 2003 the Danish Government announced that, as part of its overall construction policy, it would be making construction benchmarking compulsory. This requirement was embodied in Statutory Order No. 1135 dated 15 December 2003, which made benchmarking of Danish State construction projects in excess of 5 million Danish Kroner (DKK) compulsory with effect from 1 January 2004.

At the same time the Statutory Order introduced a requirement to the effect that, from 1 July 2005, all contractors bidding for Danish State construction projects must substantiate their capabilities in the form of KPIs from previous construction projects. These KPIs must include customer satisfaction, defects, compliance with time schedule and health and safety at the workplace.

In February 2007 the same two requirements were embodied in Statutory Order No. 136 dated 9 February 2007, which made benchmarking of social housing construction projects in excess of 5 million Danish Kroner (DKK) compulsory with effect from 1 March 2007.

In May 2008 the two requirements were extended to architects and consulting engineers. These KPIs for this type of companies include 15 questions on customer satisfaction,

In January 2010 the clients within the State and social housing areas were included in the benchmarking system. They are required to measure KPIs on end-user satisfaction, defects, compliance with time schedule, compliance with budgets and health and safety at the workplace.

The Statutory Orders have now been replaced by Statutory Order No. 1469 dated 16 December 2009 on the use of KPIs for state construction projects and Statutory Order No. 675 dated 18 June 2010 on the use of KPIs for social housing construction projects.

It should be added that the benchmarking system for contractors was subject to criticism during the 4 years after its launch in 2004. The criticism was particularly aimed at the administrative burdens caused by the reporting of data needed for KPIs on labor productivity. This resulted in revisions of the system in 2007 and 2008, which altered the number of KPIs for contractors from 14 to 10. The reduction of

administrative burdens obtained by these revisions was calculated to 60 percent.

Industry-wide backing

Introduction of compulsory benchmarking constitutes an administrative burden on companies and is not necessarily a popular measure. The reason the initiative has succeeded is largely due to the fact that BEC was formed by the organizations in the construction sector, which have seats on the Directors Board and have been backing the system actively. Further details are given on page 3.

By international standards Denmark has a very high degree of unionization for both employers and employees. Having the backing of unions and employers' associations is therefore a vital resource and of major importance to the initiative.

To this should be added the fact that the benchmarking system has been developed in close dialogue with the construction industry. In 2008 BEC introduced an online reporting system. This has helped to minimize the reporting burden for companies. Today, companies need to set aside 0.5 - 3 hours for their own benchmarking of each construction project. The dialogue continues, and BEC hopes to be able to reduce the reporting burden still further.

Statutory Orders

The Statutory Orders on the use of key performance indicators (KPIs) applies to all public sector clients whose construction projects are encompassed by the Government Construction Act¹ or Social housing Acts². The Statutory Orders also apply to institutions that receive at least 50 per cent in operating subsidies from the State. Infrastructure projects are not encompassed by the Government Construction Act and, consequently, are not covered by the Statutory Orders.

The Statutory Orders sets out the cases in which, and to whom, public sector clients must demand KPIs.

The Statutory Orders contains two separate requirements concerning the use of KPIs.

The first requirement relates to submission of KPIs in connection with selection of contractors and consultants. If a company that is subject to

¹ Act No. 228 dated 19 May 1971 on the State's construction activities, etc., as amended by Section 3 of Act No. 484 dated 9 June 2004 and Section 1 of Act No. 413 dated 1 June 2005

² Act No. 1204 dated 10 December 2009 on Social Housing etc and Act No. 786 dated 18 August 2009 on Social Dwellings for the Elderly.

the requirements set out in the Statutory Orders is unable to produce KPIs, it will not be considered for the project, although the final decision on this depends on the specific tender conditions.

The Construction Benchmarking System ensures that the company's KPIs include up-to-date data equivalent to the requirements set out in the Statutory Order.

The selection of companies for which the KPIs are required must be carried out regardless of which tender procedure is implemented - even if prequalification is omitted. The selection criteria may include other requirements than KPIs, but the KPIs must be one of the criteria.

The second requirement in the Statutory Orders is that the contractors and consultants must submit KPIs for the specific project on handing over of the project. Each company must therefore conclude an agreement with an external benchmarking agent on gathering of KPIs for the project in question.

The two requirements in the Statutory Orders differ considerably in that the KPIs for selection relate to previous construction projects, whereas the second requirement relate to KPIs for the current project.

Three-year period of limitation

The KPIs relate to the company's previously evaluated construction projects. The figures may not be more than three years old. In the Construction Benchmarking System this date is calculated from date when the evaluation is completed.

The KPIs submitted by the company to the client on handing over of the project form part of the company's Grade book, along with the KPIs from previously evaluated construction projects. Accordingly, they can be used the next time the company bids for a project.

Status for BEC's activities

The Construction Benchmarking System was launched on 1 January 2004. The table below shows the status on 1 July 2010, after 6.5 years operation:

	No. of companies	Evaluations initiated	Evaluations completed
Contractors	945	2868 (~DKK 24 billion)	1931
Consultants	247	763 (~DKK 2 billion)	497
Clients	22	27 (~DKK 1 billion)	0

This should be seen in the context that Denmark is one of the smallest EU member states, with a population of 5.5 million.

Approximately 40 percent of the cases, which the BEC evaluates, are subject to the requirements in the Statutory Orders. The remaining 60 percent of the cases are evaluated on a voluntary basis.

Participating companies

The annual turnover of the companies, that either have had or are in the process of having KPIs calculated on specific contracts, represent more than 50% of the Danish construction sector's annual production value. The participating companies span all the construction sector's disciplines, including masonry, carpentry, ventilation, joinery, glazing, painting and decorating, electrical, metalwork and general contracting companies. All large contracting companies, architects and consulting engineers already have KPIs calculated by BEC.

Viewed in relation to Denmark's size, this is a substantial volume of projects; however, this is necessary bearing in mind the ambitious aims of the Statutory Orders, viz. enabling companies to be selected for construction projects on the basis of KPIs. If the number of companies in BEC's database is insufficient, the benchmarking system could have an anti-competitive effect. BEC has therefore chosen rapid introduction of the benchmarking system, and its efforts would appear to have been successful.

Disseminator

To ensure the rapid spread of the benchmarking system, BEC has chosen not only to be the developer and operator but also, to a great extent, the disseminator. Through brochures, books, lecture tours, participation in construction fairs, conferences, video production and its website, coupled with an active communications policy vis-à-vis newspapers and trade journals, BEC has endeavored to reach all practitioners in the construction industry to explain the background and function of the benchmarking system. In BEC's experience, this extensive communications effort is hugely important to ensure general acceptance of an initiative of this nature and to ensure the necessary number of cases being benchmarked during the start-up phase.

To ensure acceptance of the benchmarking system, BEC has also carried out the data collection in a cost-intensive manner. BEC was of the opinion that it would be detrimental to the credibility of the Statutory Orders if the KPIs could be criticized for being incomplete on individual projects. A number of data collection policies were therefore chosen that have made the collation of data more costly, but, on the other hand, have ensured a very high quality of data. These choices include zero tolerance with respect to failure to report. If a respondent fails to fill in a form, the benchmarking process will ultimately be abandoned. This reminder policy is time-consuming, but has paid off in practice. The required data has been received, and it has only been necessary to abandon very few cases.

BENCHMARKING MODEL

BEC's benchmarking system is designed in such a way that the population can be evaluated for cause/effect links using general statistical tests.

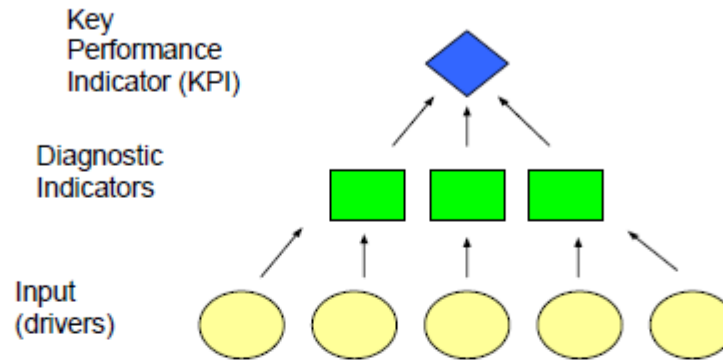


Figure 1: Basic principle behind BEC's benchmarking system

The data structure is hierarchical and permits analyses at contract level, project level, company level and, lastly, sector level.

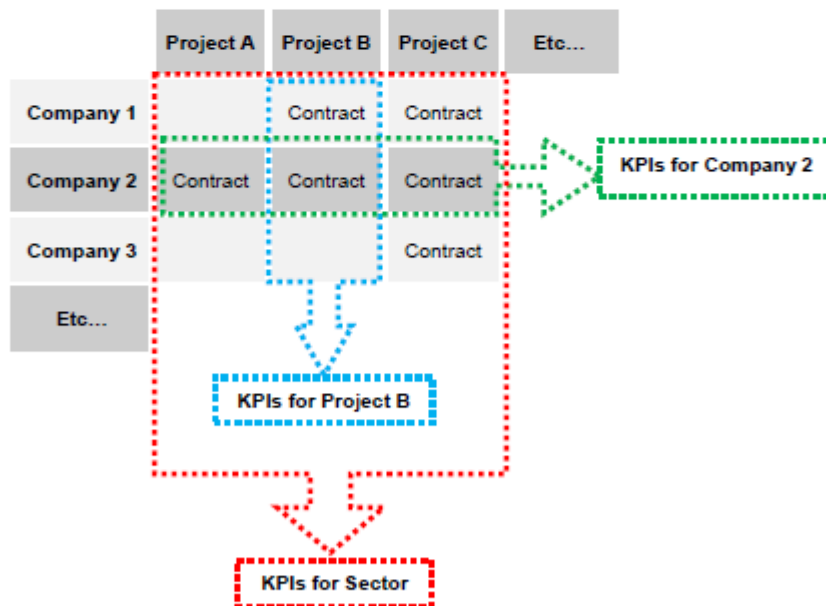


Figure 2: The data structure in BEC's benchmarking system

If a construction project is carried out on a trade contract basis the masonry contractor, for example, is evaluated on his own contract,

while the carpentry contractor is evaluated on his contract. Each company is thus only liable for its own work.

If a large contractor has won a construction contract on a main or design-build basis it is often the case that the contractor becomes the managing party while a large part of the work is carried out by subcontractors. On such a main or design-build contract, the main contractor is liable under the benchmarking system for his subcontractors' work. A poor health and safety record among the design-build contractor's subcontractors will thus be reflected in the design-build contractor's own Grade book. This motivates the contractor to take action on the health and safety front, possibly by replacing his subcontractors or ordering them to improve their health and safety standard.

Many large construction projects are carried out on a main or design-build basis, where a large company acts as the managing contractor. If the company has few hourly paid workers on the building site, it will not make sense to evaluate and benchmark purely on the basis of those.

In the benchmarking system for contractors there is a special rule that if the parties disagree on what is to be reported, no KPIs will be calculated for the project in question; however, this will lead to a remark in the company's Grade book.

Confidential vs. public KPIs

When a company calls on BEC to evaluate a contract or a complete construction project, it can rest assured that the KPIs will only be passed on to the company itself and the parties that need to comment on some of the data collected. The standard contract between the company and BEC will describe who these parties are.

It is the company itself that passes on its Grade book on request from the client. BEC does not pass on the companies' Grade to any third parties.

All employees at BEC have signed a confidentiality agreement in connection with their employment.

In BEC's database, companies and clients can benchmark themselves against other anonymized companies and clients. They can also benchmark the individual evaluated contracts and construction projects against each other. Moreover, they can gain access to contract and project data, provided they have requisitioned the evaluation of the contracts and projects themselves. If, for example, a trade contractor requisitions evaluation of a construction contract, the client will be asked to contribute contract data; however, only the trade contractor has access to the data in the database.

Companies are consequently only able to identify data for their own company and their own construction projects.

According to the Statutory Orders the KPIs derived from state construction projects and social housing construction projects will be published by the Danish authorities in 2010. This direct access to the companies KPIs is expected to have a major impact on the dissemination of the benchmarking system.

The 10 KPIs for contractors

1. Actual construction time in relation to planned construction time

This KPI expresses the relationship between the actual construction time and the expected construction time. The consequences of the alterations in terms of time, expressed in calendar days, are included in the expected construction time. This ensures that the contractor's ability to meet deadlines is measured exclusively on factors on which he himself has influence. Alterations that are not attributable to the contractor include extra works demanded by the client, public orders, regulatory requirements and late start-up of building site - for example because the client has not obtained the necessary approvals.

This KPI is calculated as a percentage, where 100% corresponds to the actual construction time being identical to the expected construction time. If the work takes longer than anticipated, the KPI will be greater than 100%. The minimum value for this KPI is 100%.

The following four factors are used for calculating the KPI: the date of start-up of the construction phase, the planned handing-over date, the actual handing-over date and alterations agreed with the client or caused by external factors. The alterations are expressed in working days.

2. Number of defects entered in the handing-over protocol, classified according to degree of severity (4 KPIs)

This KPI shows the number of defects recorded in the handing-over protocol during the handing-over meeting in respect of the contract to be evaluated. The number of defects is divided into three classes based on severity, which is judged on the basis of their financial, structural and functional implications for the construction project/client. There is an additional class for defects that need further investigation.

The number of defects is counted in relation to the number of defective construction parts, i.e. if a defect is repeated in several parts of the building, it is recorded as the number of repetitions, even if the defect features as only one item in the snagging list.

The KPIs concerning the number of defects are calculated in relation with the contract price.

3. Economic value of defects

This KPI shows the recorded defects (see 2. above) quantified in the economic value. This is calculated as the stipulated cost of rectifying the defects.

This KPI is calculated as a percentage of the contract price.

4. Have there been defects in the delivery, which hampered, or actually prevented the intended use of the essential parts of the building?

This KPI is a yes/no indicator for severe defects preventing the client or the users from using parts of the building as intended.

5. Accident frequency

The accident frequency is an expression of the physical working environment – health and safety at the worksite.

The benchmarking system uses the Danish Working Environment Authority's definition of an accident: "A sudden, unforeseen and injurious work-related event causing bodily injury and a minimum of one working day away from work."

The accident frequency is expressed as the number of accidents per one billion Danish kroner (DKK) using the contract price as the denominator.

Registration of accidents applies to hourly paid labor only. If a main contractor is being assessed, any accidents incurred by subcontractors whilst working on the project are also included. Only occupational injuries that are reported to the Danish Working Environment Authority are included in the KPI. So-called near misses and other forms of incidents are not required to be reported and are therefore not included. Occupational accidents are not graded by severity.

6. Customer satisfaction with the construction process

Customer satisfaction with the construction process is measured using a scale from 1 to 5 based on a weighting carried out on completion of the project. Here, the "customer" is identical to the client, who may be represented by a consultant, if the latter is authorized to sign the handing-over protocol.

In special cases the customer may also be the subcontractor's customer, i.e. the main/design-build/multiple trades contractor.

It is assumed that the customer has followed the entire construction process. In the first part of the survey the customer must perform a weighting of 8 standard questions that jointly express his expectations to the contractor. In the second part of the survey the customer must give a grade for each of the 8 questions, assessing the service supplied using the scale "much worse than average", "average" and "much better than average". The grades must be measured against what an "average" contractor would supply.

The total customer satisfaction is calculated as a weighted average of the grades.

The 8 questions are shown below:

1. Contractor's ability to assist in project design review or planning of task solution prior to the construction phase
2. Contractor's ability to find solutions in accordance with the specification requirements and otherwise meet client needs and wishes within the agreed framework
3. Contractor's ability to meet deadlines
4. Contractor's ability to engage in dialogue about additional services and prices for these
5. Contractor's ability to conduct a constructive dialogue and contribute to good cooperation within the project team
6. Contractor's ability to take account of the site surroundings, for example neighbors, residents, additional staff and possibly users of the building while working
7. Contractor's ability to help implement a satisfactory hand over
8. Contractor's ability to provide information on the operation and maintenance in accordance with the tender material requirements

6. Customer loyalty

As a part of the customer satisfaction survey, the customer also assesses (1 to 5) if he would hire the same company again for a similar task. The assessment is made by using the scale "excluded", "maybe" and "definitely".

The 15 KPIs for consultants

The benchmarking system for architects and consulting engineers was developed and launched in 2008. This was four years later than the launch of the benchmarking system for contractors.

The system consists entirely of subjective KPIs. The assessment is made by the customer and the procedure takes maximum 10 minutes.

Each task is assessed two times: first time at the end of the design phase and second time after completion.

In the first part of the survey the customer must perform a weighting (1 to 5) of 15 standard questions that jointly express his expectations to the consultant. In the second part of the survey the customer must give a grade (1 to 5) for each of the 15 questions, assessing the service supplied using the scale "much worse than average", "average" and "much better than average". The grades must be measured against what an "average" consultant would supply. For question No. 1 to 13 the customer has the option to answer "Not applicable".

The 15 KPIs for consultants are shown below:

9. Consultant's ability to set realistic budgets
10. Consultant's ability to set realistic timetables
11. Consultant's ability to illustrate his proposals
12. Consultant's ability to conduct a constructive dialogue
13. Consultant's contribution to constructive collaboration between project stakeholders
14. Consultant's contribution to achieving a satisfactory aesthetic solution
15. Consultant's contribution to achieving a satisfactory functional solution
16. Consultant's contribution to achieving a good indoor climate
17. Consultant's contribution to achieving a solution with a sensible business administration
18. Consultant's contribution to achieving an environmentally sound solution
19. Consultant's ability to deliver the agreed quality of project documentation
20. Consultant's management processes with residents / tenants / users / neighbors during construction
21. Consultant's contribution to implement a satisfactory delivery
22. Client's overall satisfaction with the consultant
23. Client's indication of whether he would use the consultant again in similar projects

The 27 KPIs for construction clients

The benchmarking system for construction clients builds on the KPIs for contractors. The KPIs for clients can only be calculated if a parallel evaluation of the contractor(s) is conducted since this is where most of the input data comes from. This means that the extra amount of data needed for the clients KPIs is very limited.

The purpose of the benchmarking system for clients is different than that of the systems for contractors and consultants. Whereas there is almost always a selection of contractors and consultants this is very seldom the case for clients. Hence the Grade book for a construction client is not a tool for selection but a set of indicators which can be used for comparative benchmarking between construction clients. Also the Danish authorities may use the KPIs for public clients as a means to monitor different performance levels.

1. Relative deviation between planned and actual project period

This KPI expresses the relationship between the actual project period and the expected project period. The project period is defined as the period from the commencement of the main design to commissioning of the building.

This KPI is calculated as a percentage, where 100% corresponds to the actual project period being identical to the expected project period. If the work takes longer than anticipated, the KPI will be greater than 100%.

2. Changes in the timetable for the project, broken down by cause

Changes in the project period must be quantified according to these categories:

1. Conditions relating to the local plans and the authorities' handling of the project
2. Conditions relating to appropriation approval.
3. Conditions relating to the client's demands for extra services
4. Conditions relating to the customer's / user's approvals
5. Conditions relating to feasibility studies which show unpredictable complexity of the project and unforeseen obstacles to the construction site, including obstacles in soil or damage to existing structures being rebuilt / renovated
6. Conditions relating to the consultant
7. Conditions relating to the contractor

3. Relative deviation between planned and actual project price

Changes in the project price are recorded for the project including both its design phase and its construction phase. Some of these changes do not affect the final project price. That applies, for example, to projects where one construction material is being substituted by another at the same price. The same applies where the quality of one construction part is improved to the detriment of the quality of another. Such changes are not included.

The main purpose of this KPI is to measure the ability to predict the project price. Changes contained within the total project price are consequently not recorded.

This KPI is calculated as a percentage, where 100% corresponds to the actual project cost being identical to the expected project cost. If the work costs more than anticipated, the KPI will be greater than 100%.

4. Changes in project price

Changes in the price of all contracts concluded with a client as one of the parties are reported. The changes are broken down into seven categories:

1. Change in project price due to late changes in project design and function
2. Changes in project price due to lack of clarification of client's needs
3. Changes in project price due to conditions relating to the consultant
4. Changes in project price due to conditions relating to the contractor
5. Changes due to requirements from the authorities
6. Unforeseeable cyclical costs
7. Unforeseeable technical issues

5. Economic value of defects

This KPI shows the recorded defects quantified in the economic value. This is calculated as the stipulated cost of rectifying the defects. The economic value is calculated by summing the data from the contractor(s) on the project.

This KPI is calculated as a percentage of the project price.

6. Accident frequency

The accident frequency is an expression of the physical working environment – health and safety at the worksite.

The benchmarking system uses the Danish Working Environment Authority's definition of an accident: "A sudden, unforeseen and injurious work-related event causing bodily injury and a minimum of one working day away from work."

The number of accidents on a project is calculated by summing the data from the contractor(s) on the project.

The accident frequency is expressed as the number of accidents per one billion Danish kroner (DKK) using the total contract price as the denominator.

Registration of accidents applies to hourly paid labor only. Only occupational injuries that are reported to the Danish Working Environment Authority are included in the KPI. So-called near misses and other forms of incidents are not required to be reported and are therefore not included. Occupational accidents are not graded by severity.

7. Calculated energy consumption

The estimated annual energy consumption is measured in kWh per m². The KPI is provided by external consultants and calculated in accordance with the Building Regulations set requirements.

8. Requisitioners' satisfaction with the process and the product

In the Construction Benchmarking System there is a distinction between the *client* (developer) and the *requisitioner*.

The requisitioner is typically a public body, who needs a new building or a refurbishment. Often the requisitioner is not experienced in managing construction projects and does not have the resources to implement the project on their own. A professional client can then manage the project on behalf of the requisitioner. It is also often the case that public bodies are required to use certain professional client organizations within the Danish authorities. The client signs the contracts with consultants and contractors and he manages the construction project. After completion the project is handed over to the requisitioner.

For instance the requisitioner could be the rector of a university who needs a new laboratory. In this case The Danish University and Property Agency would act as the client.

Another type of requisitioner is a municipality with a need of increasing its stock of social housing. In this case a social housing organization will act as the client.

The requisitioners' satisfaction with the product and with the performance of the client is measured with these 8 questions:

1. The client's ability to set realistic budgets
2. The client's ability to set realistic timetables
3. The client's ability to engage in a process of cooperation and dialogue with the requisitioner
4. The client's ability to involve users / user preferences during the design process

5. The client's ability to manage processes with residents / tenants / users / neighbors during the design phase and execution of construction works
6. The client's contribution to implement a satisfactory transition from construction phase to the operation
7. Overall satisfaction with client engagement
8. Overall assessment of the building

THE COMPANY'S GRADE BOOK

For each evaluation the company receives a factsheet with the KPIs which have been calculated for the particular task. Each factsheet is valid for three years.

The company's Grade book contains the average of each KPI in the company's valid factsheets. When calculating the Grade book the KPIs from each factsheet are weighted with the contract price of the particular task. The Grade book is automatically updated when the company receives a new factsheet and when a factsheet is no longer valid.

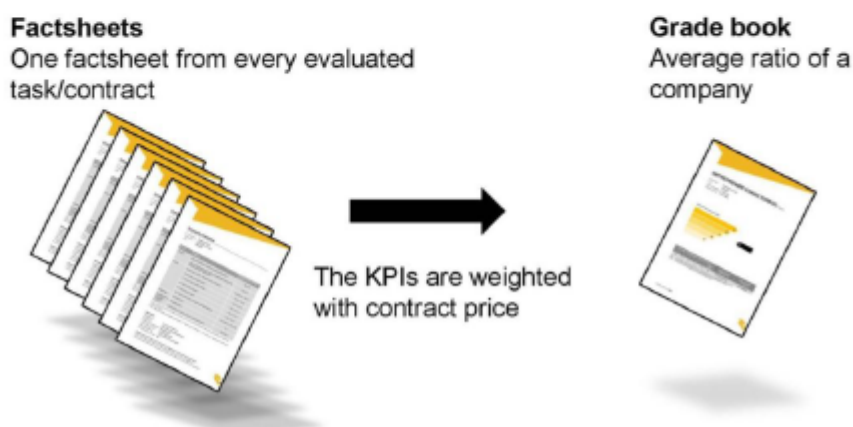


Figure 3: Basic principle behind factsheets and Grade book

The company is provided with a Grade book for the contracts it has had evaluated. The Grade book is a dynamic entity that changes continuously. It must state how many construction projects have been evaluated and their scale. The more projects in the Grade book, the more reliable the indicators.

A Grade book cannot be used until at least three projects have been evaluated. The evaluation of the projects must have been completed within the last three years. This ensures that the companies are judged on their current performance. Projects that are more than three years old are deleted from the Grade book. If the "old" KPIs were left in, the companies would have less motivation to improve.

The contractor's Grade book

Below is an example of the contractor's Grade book. The KPIs are average for the sector level by 1 July 2010.

Grade book			
Company	Construction Company A/S		
VAT No.	12345678		
Area	Key Performance Indicator		Company average
Deadlines	Actual construction time measured against planned construction time		102.9 %
Defects	1) Number of minor defects		6.351 per DKK 1 million
	2) Number of less serious defects		1.426 per DKK 1 million
	3) Number of serious and critical defects		0.273 per DKK 1 million
	UN: Number of defects to be investigated further		0.181 per DKK 1 million
	Economic value of defects		0.3 %
	Proportion of cases with defects in the delivery, which hampered, or actually prevented the intended use of the essential parts of the building		1.0 %
Health and safety	Accident frequency		15.4 accidents per DKK 1 billion
Customer satisfaction	Customer satisfaction		3.5
	Customer loyalty		4.5
Assessment basis			
Project type	Number of projects evaluated	Total contract sum for evaluated projects expressed in million DKK (2004 price level)	Number of projects on which the evaluation has been abandoned (See note)
New build	13	25 - 100	1
Repair and maintenance	4	Less than 25	0
Note: Projects on which the evaluation has been abandoned or where the parties could not agree or did not wish to participate.			

Figure 4: Example of the Grade book for a contractor.

The consultant's Grade book

Below is an example of the Grade book for an architect or a consulting engineer. The KPIs are average for the sector level by 1 July 2010.

Grade book			
Company	Consultant Company A/S		
VAT No.	234567891		
Key Performance Indicator			Company average
Consultant's ability to set realistic budgets			3.6
Consultant's ability to set realistic timetables			3.6
Consultant's ability to illustrate his proposals			3.9
Consultant's ability to conduct a constructive dialogue			4.1
Consultant's contribution to constructive collaboration between project stakeholders			3.9
Consultant's contribution to achieving a satisfactory aesthetic solution			4.0
Consultant's contribution to achieving a satisfactory functional solution			4.0
Consultant's contribution to achieving a good indoor climate			3.8
Consultant's contribution to achieving a solution with a sensible business administration			3.6
Consultant's contribution to achieving an environmentally sound solution			3.6
Consultant's ability to deliver the agreed quality of project documentation			3.8
Consultant's management processes with residents / tenants / users / neighbors during construction			4.0
Consultant's contribution to implement a satisfactory delivery			3.7
Client's overall satisfaction with the consultant			3.6
Client's indication of whether he would use the consultant again in similar projects			3.6
Assessment basis			
Project type	Number of projects evaluated	Total contract sum for evaluated projects expressed in million DKK (2004 price level)	Number of projects on which the evaluation has been abandoned (See note)
New build	4	2.5 - 5	0
Repair and maintenance	3	Less than 2.5	0
Note: Projects on which the evaluation has been abandoned or where the parties could not agree or did not wish to participate.			

Figure 5: Example of the Grade book for a consultant.

The client's Grade book

The client's Grade book shows the client's and his business partners' average performance on all the projects he has had evaluated.

Below is an example of the client's Grade book. The BEC has not yet completed any evaluations for clients, hence the KPIs are fictional.

Grade book		
Company	Construction Client A/S	
VAT No.	345678912	
Area	Key Performance Indicator	Company average
Price	Relative deviation between planned and actual project price	104.3 %
Changes in project price	Change in project price due to late changes in project design and function	2.0 %
	Changes in project price due to lack of clarification of client's needs	0.0 %
	Changes in project price due to conditions relating to the consultant	0.5 %
	Changes in project price due to conditions relating to the contractor	0.0 %
	Changes due to requirements from the authorities	0.0 %
	Unforeseeable cyclical costs	0.0 %
	Unforeseeable technical issues	1.8 %
Deadlines	Actual construction time measured against planned construction time	102.9 %
Changes in deadlines	Conditions relating to the local plan and the authorities' handling of the project	0.0 %
	Conditions relating to appropriation approval.	0.0 %
	Conditions relating to the client's demands for extra services	0.0 %
	Conditions relating to the customer's / user's approvals	0.0 %
	Conditions relating to feasibility studies which show unpredictable complexity of the project and unforeseen obstacles to the construction site, including obstacles in soil or damage to existing structures being rebuilt / renovated	0.0 %
	Conditions relating to the consultant	0.0 %
	Conditions relating to the contractor	2.9 %

(Continues on the next page)

Defects	Economic value of defects	0.3 %	
Health and safety	Accident frequency	15.4 accidents per DKK 1 billion	
Energy	Estimated annual energy consumption	40.1 kWh per m ²	
Requisitioners' satisfaction	The client's ability to set realistic budgets	3.5	
	The client's ability to set realistic timetables	4.5	
	The client's ability to engage in a process of cooperation and dialogue with the requisitioner	3.2	
	The client's ability to involve users / user preferences during the design process	4.1	
	The client's ability to manage processes with residents / tenants / users / neighbors during the design phase and execution of construction works	3.0	
	The client's contribution to implement a satisfactory transition from construction phase to the operation	4.8	
	Overall satisfaction with client engagement	3.3	
	Overall assessment of the building	4.9	
Assessment basis			
Project type	Number of projects evaluated	Total contract sum for evaluated projects expressed in million DKK (2004 price level)	Number of projects on which the evaluation has been abandoned (See note)
New build	3	25 - 100	0
Repair and maintenance	1	Less than 25	0
Note: Projects on which the evaluation has been abandoned or where the parties could not agree or did not wish to participate.			

Figure 6: Example of the Grade book for a construction client.

DATA COLLECTION AND VALIDATION

Evaluation of a contract or a project is subject to conclusion of a benchmark evaluation contract with BEC prior to start-up. This requirement prevents “cherry-picking” and it ensures that we receive data from a representative section of construction projects.

BEC collects all data on start-up and completion of the project.

Validation

When companies are to compete on KPIs determined by BEC, the KPIs need to be of a high quality. To ensure the quality of the data, BEC applies three different validation principles.

The simplest form of validation consists of receiving inspection, whereby BEC’s case administrator checks all data reported on a given project and cross checks. There are also some automatic checks incorporated in the digital forms used by the BEC. This means that a respondent is not allowed to send a form if it is filled in incorrectly or insufficiently.

Besides the simple checks, a number of projects are selected for random control, where documentation from the company concerning specific information must be submitted to the case administrator.

The third principle is applied to all evaluations for contractors and means that the parties on the project approve the data provided by the other parties. For example, the client reports the number and distribution of defects on handing over. This data is subsequently forwarded for approval by the contractor who digitally shows his acceptance of the registered data. In the event of disagreement between the parties, a so-called consultation will be initiated, whereby BEC urges the parties to reach an amicable agreement, partly by submitting documentation in respect of the data reported. It only happens very rarely (in less than 2% of cases) that a case has to be abandoned, wholly or in part, resulting in a remark in both the contractor's and the client's Grade book.

The third form of validation is not applied to subjective KPIs, since the KPIs would not be credible if it was possible to alter a subjective evaluation.

BEC’s benchmarking system incorporates this type of incentive structure to motivate the parties to agree on the data forming the basis for calculation of the KPIs. This mutual acceptance is vital to the credibility of the KPIs.

ABOUT BEC

The Benchmark Centre for the Danish Construction Sector (BEC) is a commercial nonprofit foundation established by a wide range of construction sector players with a view to promoting quality and efficiency in construction.

BEC was formed in February 2002 as a joint initiative between construction industry organizations and the government. The current members of the Directors Board are listed on page 3.

The initiative is privately funded by organizations, foundations and private enterprises in the construction sector.

BEC is one of the outcomes of the debate in recent years regarding lack of productivity and quality in the Danish construction sector. BEC is charged with establishing a benchmarking system with KPIs for the construction process as well as the finished building. BEC must also analyze construction productivity, disseminate knowledge about construction, and host discussions between the various players in the construction sector. BEC may carry on business for the general benefit of the construction sector.

BEC currently functions as a private company that sells evaluation of construction projects to architects, consulting engineers and contractors including main contractors, trade contractors and sub-contractors. Income from this almost covers the centre's costs. The remaining funding comes from contributions from private organizations and foundations. To date, BEC has not received any public funding.

BEC has been approved by The Danish Agency for Science, Technology and Innovation as a so-called Section 8H institution under Danish tax legislation, i.e. as an institution that undertakes research and is therefore entitled to receive donations for this that are deductible for the donor.

BEC has one office address in Denmark:

The Benchmark Centre for the Danish Construction Sector
Strandgade 27B, Plan 5
DK-1401 Copenhagen K

Tel. +45 3264 1440

Fax +45 3264 1441

Email: info@byggeevaluering.dk

Website: www.byggeevaluering.dk

Benchmarking database: www.byggetal.dk

Executive Board



Peter Hesdorf
CEO
Email: ph@byggeevaluering.dk

7.4 APPENDIX D

EVALUERINGSMONOPOLET ER BRUDT!

Kan det lade sig gøre
at betale for en Kia
og få en Ferrari?

Evaluering hos Bülow Management A/S

Bülow Management har, i samarbejde med "Business Excellence Network 1", udarbejdet "Byggeriets Nøgletals- og KundeIndeks" (BNKI). BNKI tilbyder evaluering af hyggerier af alle størrelser og typer i overensstemmelse med de gældende bekendtgørelser. Derudover fokuserer BNKI på kundetilfredshed og -loyalitet samt den interne brug af nøgletalsanalysen, og hvordan man kan bruge nøgletalsanalysen til at skabe forbedringer.

For selvom evalueringer primært laves for, at entreprenøren, rådgiveren eller bygherren kan blive prækvalificeret til fremtidige opgaver, indeholder de meget mere. Systematisk evaluering og sammenligning af entrepriser giver den enkelte virksomhed en unik mulighed for at forbedre sin forretning, og dermed øge sin konkurrenceevne, kundetilfredshed samt medarbejdertilfredshed.




Adm. Direktør Jan Wittrup

Udvalgte referencer

B. Nygaard Sørensen A/S

Bjarne Brath A/S

Bo Michelsen A/S

Buus Totalbyg A/S

Einar Kernerup A/S

Entrepreneurfirmaet Erling Jensen A/S

Hellerupbyg A/S

HTH Hjørring ApS

HUJ A/S

Kaj Bech A/S

Lund & Staun A/S

M. Thomsen Støtt, Aalborg A/S

NCC Construction Denmark A/S

NCO Byg A/S

Per Aarsleff A/S

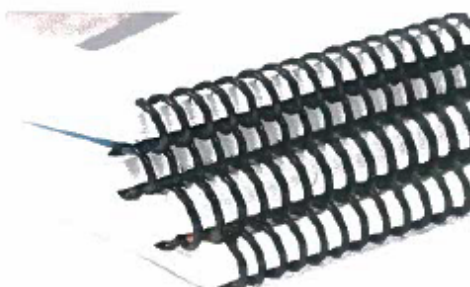
Skougruppen A/S

Standardudgaven



Faktablad:

Faktabladet indeholder nøgletal for entreprenørens evne til at overholde tidsfrister, fejl & mangler på entreprisen, arbejdsulykker og kundetilfredshed og -loyalitet. Kundetilfredshed og -loyalitet indgår ligeledes i rådgiverens faktablad.



Karakterbog:

Karakterbogen indeholder de gennemsnitlige nøgletal for alle faktablade de seneste 3 år. Nøgletallene vægtes med entrepriserammen i de inkluderede faktablade, således at en stor entreprise vægter tungere end en mindre entreprise.

“ Med byggeriets nøgletalssystem har bygherrer fået et godt værktøj til brug for udvælgelse af rådgivere og entreprenører. Forsvarets Bygnings- og Etablisementstjeneste (FBE), der som statslig bygherre er forpligtet til at anvende dette værktøj, har med succes gjort byggeriets nøgletalssystem til en del af sin udvælgelsesprocedure. Det er betydningsfuldt for FBE, at kunne udvælge egnede rådgivere og entreprenører til sine bygge- og anlægsarbejder. Dermed er det vigtigt, at byggeriets nøgletalssystem er troværdigt for alle, hvilket også stiller store krav til evaluatoren. FBE kan kun opfordre rådgivere og entreprenører til at lade sig evaluere i kampen for mere kvalitetsbyggeri.



Forsvarets
Bygnings- og
Etablisements-
tjeneste

“ Kundetilfredshed er nøglen til at opnå mersalg og få ambassadørkunder. Bülow Managements BNKI koncept med kundeevalueringssrapporter er en oplagt mulighed for at få fokus på kvaliteten af sine rådgiverydelser. Det giver muligheden for at få håndtag på, hvordan man kan udvikle sin virksomhed, og hvor man skal sætte ind for at opnå bedre resultater. At konsulentydelsen udføres til en attraktiv pris, er jo kun en yderligere fordel.



Kjeld Ghazati
Partner og arkitekt MAA –
Exners Tegnestue A/S

“ BNKI-rapporten indeholder rådgivning på baggrund af de opnåede nøgletal plus ekstra nøgletal på kundens tilfredshed og loyalitet. Dette giver, i større omfang, den enkelte entreprenør muligheden for aktivt at bruge sine nøgletal til at identificere interne forbedringsmuligheder. Derudover får vi stor indsigt i kundernes overordnede tilfredshed, som gør, at vi kan forbedre os i forhold til kundernes forventninger fra projekt til projekt.



Michael Lund
Adm. direktør Lund & Staun
Formand for Træsektionen, Dansk Byggeri

Ekstra udbytte ved BNKI

I forhold til øvrige evaluatore



Udvikling

En BNKI-rapport indeholder en udviklingstabel, som opsummerer de sidste 5 evalueringer foretaget via BNKI.

Benchmark af nøgletal

Nøgletal på den enkelte evaluering benchmarkes med alle tidligere evalueringer for den enkelte virksomhed og BNKI. Dermed kan virksomheden se, hvordan den pågældende opgave er gået i forhold til virksomhedens egen standard og i forhold til BNKI standard.



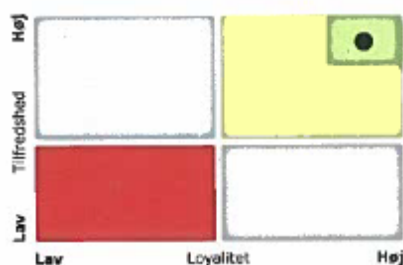
EPSI Kundetilfredshed:

Udover de 8 lovpligtige spørgsmål til kundetilfredshed, inkluderer BNKI 3 ekstra spørgsmål til kundetilfredshed. Disse spørgsmål er opstillet efter den Europæiske standard for måling af kundetilfredshed.



EPSI Kundeloyalitet:

Udover det lovpligtige spørgsmål til kundeloyalitet, inkluderer BNKI 2 ekstra spørgsmål til kundens loyalitet, opstillet efter den Europæiske standard for måling af kundeloyalitet. Dette for at den enkelte virksomhed kan måle sig med de bedste virksomheder i Europa.



Loyalitetssegmentering:

På baggrund af EPSI-spørgsmålene til kundens tilfredshed og loyalitet kan kunden segmenteres ifht vedkommendes loyalitet. Hvis en kunde både er meget tilfreds og meget loyal, klassificeres kunden som en "ambassader". Dette benchmarkes op mod virksomhedens tidligere evalueringer og alle BNKI evalueringer.



Bygherreinput og opfølgning:
Ved hver enkelt BNKI evaluering bedes bygherre indgive 3 områder, hvor bygherren mener, at entreprenøren eller rådgiveren kan forbedre sig. Disse områder kobles med de udregnede nøgletal for at se sammenhænge. Ca. 14 dage efter endt evaluering følger Bülow Management op på entreprenøren/rådgiveren for i fællesskab at gennemgå BNKI rapportens anbefalinger.



Rådgivning:
Hver enkelt BNKI-rapport indeholder, på baggrund af de opnåede nøgletal og virksomhedens tidligere nøgletal, rådgivning. Denne rådgivning har til formål at fremhæve forbedringsområder og forbedringsmuligheder for virksomheden, for derved at forbedre virksomhedens nøgletal og hæve kundernes tilfredshed og loyalitet.



Rapport:
Alt ovenstående inkluderes i en samlet rapport. BNKI-rapporten udarbejdes efter hver evaluering og sendes til virksomheden. Virksomheden modtager ligeledes et særskilt faktablad og en særskilt karakterbog.



Offentliggørelse:
Alle faktablade udregnet af Bülow Management offentliggøres på hjemmesiden bnki.dk. Dette gøres for at gøre branchen så transparent som mulig og for at give virksomheder yderligere mulighed for at konkurrere på kvalitet.

Alt inklusiv

Prisniveau:

Entreprenør

Entrepisesum
under 15 mio.: **7.000 kr.**

Entrepisesum
over 15 mio.: **9.000 kr.**

Rådgiver

Evaluerig: **4.000 kr.**

7.5 APPENDIX E

PUBLICATION OF KPIS

Based on the governmental ambition of publishing all KPIS from state and social housing building projects, BEC initiated a project with the purpose of publishing all their customers KPIS, also from building projects that was not subjected to the executive orders. But Bülow Management and Byggeriets Nøgletal were not supportive of this publication strategy. The progress of publication revealed contradictions between the ambition of driving companies to request benchmarking on a voluntary basis with an interests in performance improvements and the ambition of generating total transparency of the market for the benefit of clients.

The initial attempts to publish KPIS were launched as EBST in 2010 announced that KPIS from contractors, consulting engineers and architects were going to be published on their web page. The social housing sector would also publish KPIS from their building projects on the Danish Building Defect Fund's web page (553). Publication of KPIS had already in 2008 been given much attention by EBST, who found the publication of KPIS decisive for benchmarking to generate transparency (336). And as described earlier, the publication of KPIS was also a high priority of the social housing sector.

The division of KPIS on two different websites provided an obvious opportunity for BEC to collect their KPIS from state and social housing projects in one database, from which clients could have access to KPIS from both sectors. With an anchor in an overall ambition of generating transparency of the market, BEC further announced that all KPIS in BEC's database would be public available, including building projects that were not subjected to the legal requirements. This ambition was accordingly part of the strategy of getting clients to use KPIS more actively by getting access to a large data base of the performances of potential collaborators.

“Many clients requested that KPIS eventually would be something that could be accessed on a web page [...] I consider this to be contributing to a dissemination of benchmarking. If KPIS are difficult to obtain, the motivation for clients to use them will automatically decrease.” (Interview Hesdorf)

The interviews conducted for this study reflected that the professional associations were not supportive of a publication of the members' KPIs, and considered it a way to criticize their members in public. These view point emerged as the member companies of the professional associations interpreted and responded to the 'Bygge Rating' initiative. Neither Bülow Management of Byggeriets Nøgletal chose to follow BEC's ambition of publishing all registered KPIs. In this way they put pressure on BEC with a prospect of losing costumers that did not have an interest in making their KPIs from building projects not subjected to the executive order available for the public. In his account for why Bülow Management did not support this total transparency ambition, Støvring stated:

“First of all you will remove the incentive to conduct benchmarking on a voluntary basis, because the companies become exposed for a risk that they fundamentally do not have an interest in.” (Interview Troels Støvring)

With this point of departure, Støvring explained that construction companies' voluntary engagement in benchmarking, is chosen with an interest in achieving a better building process, not with an interest in making the KPIs public available.

“I think that it is fine to publish KPIs from state and social housing building projects. But benchmarking that you choose of your own free will is done because you see a value in it. Therefore it must be a choice for the companies whether they want to publish their KPIs.”

This statement clearly reveals how Bülow Management were counteracting BEC's attempts to disseminate benchmarking by facilitating the use of track records, despite the benchmarking operators' clear recognition of the correlation between the penetration of track records as selection tool for clients and the incentives for construction companies to strive for good KPIs.

As a result of the widespread dissatisfaction with publishing KPIs from building projects that were not subjected to the legal requirements, BEC changed their approach to generating transparency of the market. They did so by offering their customers an opportunity to deselect publications of their KPIs on BEC's web page.

“Companies can choose to present their KPIs on our web site, if they wish to use them for the purpose of marketing. We support this utilization of KPIs if our customers

request it. I see this opportunity as a natural element in generating increased transparency of the market.” (Interview Hesdorf)

Asked about how this ambition of transparency was influenced by the reluctance of the two other benchmarking operators, Hesdorf responded:

“It means that there is not a mutual strategy for the KPIs: Are they to be public available or not? But these are the conditions, and it entails that some companies can chose to make their KPIs publicly available, while others can chose not to. [...] I think that it is going to be a slow process, but I imagine the day that you are able to find KPIs from any construction company. That day you will have something that is operational, which have been missing so far.” (Interview Hesdorf)

As a result of the political struggles of publishing KPIs, BEC provided a database consisting of KPIs from state and social housing building projects and additionally KPIs from those companies who voluntarily had chosen to lay out all their KPIs, including from building projects that were not subjected to the legal requirements. People with an interest in the performance of contractors, consulting engineers and architects were provided a tool where they could type in performance criteria for potential bidders, and construction companies were provided an opportunity to compare their performance with their competitors (593).

EBST and the Ministry of Social Affairs respectively made their own less searchable data bases that did not provide an opportunity to identify those companies with the best KPIs. These databases consisted of an overview of the companies that had KPIs from respectively state building projects or social housing building projects. The publication of KPIs accordingly became less ambitious than BEC originally intended.

BYGGE RATING

Another attempt from BEC to promote their prognostic framing of benchmarking as normalizing governing technology was also influenced by Bülow Management and Byggeriets Nøgletal.

‘Bygge Rating’ was presented in 2011 at BEC’s annual meeting and had the purpose of making it easier for clients to assess their bidder’s performance, by providing a supplement to the track

records that could facilitate the use of track records for selection of collaborators. (Byggeri.dk, 2011).

‘Bygge Rating’ was presented in 2011 at BEC’s annual meeting which had the purpose of making it easier for clients to assess their bidder’s performance (593).

“This is a ‘light’ version [of the track records] that facilitates the communication about companies’ KPIs. Bygge Rating will be ideal when comparing several companies” (Hesdorf, 593)

Bygge Rating was considered to be a supplement to the track records, providing clients a better overview of their bidders’ performances.

“For us it is about increasing the utilization of benchmarking, and we consider that Bygge Rating is an efficient way” (Hesdorf, 601)

The system was very illustratively showing the performance of the companies, by grading the different KPIs from A to E.

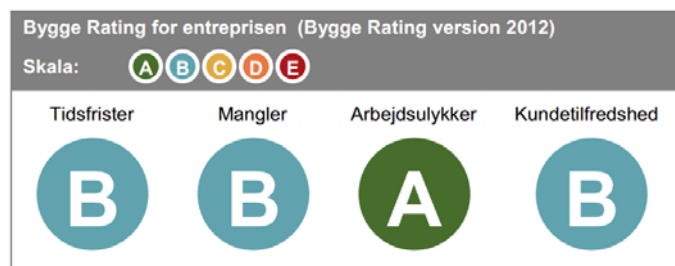


Figure 7: Example of Bygge Rating for contractors. Showing from left to right: appliance with time, building defects, work accident and client satisfaction.

The development and launch of Bygge Rating was according to Hesdorf based on a request from clients about a more simple use of benchmarking (601).

“It is especially clients that have raised the request of supplementing the track records with a more a rating that is easier to understand and could help putting the KPIs in perspective. Based on these request from a large study in 2010 we made a suggestion of a rating system.” (Interview Hesdorf)

The development and launch of Bygge Rating was a reflection of BEC's ambition of generating more transparency and disseminating benchmarking through an increased request for track records from clients.

“The rating system is a part of the strategy of disseminating benchmarking and generating more transparency. The system has made it easier to understand what the KPIs mean. We recognized that it was a problem [for some clients] to understand the KPIs from their bidders. By communicating them by means of letters and colors this is now easier. And if can provide more transparency then it is definitely in the centre's interests to follow this path” (Interview Hesdorf)

BEC attempted to disseminate Bygge Rating to the other benchmarking operators by making the system open source. But Bülow Management was not interested in this simplification of the track records, and found it to contradict their focus on contractors, consulting engineers and architects.

“Bygge Rating is focused on facilitating clients' interpretation of KPIs. [...] Firstly, you need to consider the data quality, because it is still an issue to get consistent registrations from all building projects. If you have a precondition saying that data is not always perfect, then [the idea of] Bygge Rating starts to disintegrate.

Secondly, Bygge Rating is based on quartiles, and when using with percents, it can entail that the some of the classifications of the letters [in Bygge Rating] can be very broad while others are very narrow. And very little differences can separate an A-company and a B-company. The client will never see through this. He bases his selection on the letters. This is why we oppose the rating system. [...] We think that the system is over simplifying KPIs.” (Interview Troels Støvring)

Støvring however advocated for transparency as a way to increase the performance in the construction industry, but found that Bygge Rating was hindering the transparency shifting focus from the KPIs to the letters.

The challenges for promoting Bygge Rating as legitimate tool for clients' selection of bidders did not stop here, as Byggeriets Nøgletal chose to develop their own rating system, when the

benchmarking operator ascertained that construction companies had started to promote their Bygge Rating on their web pages:

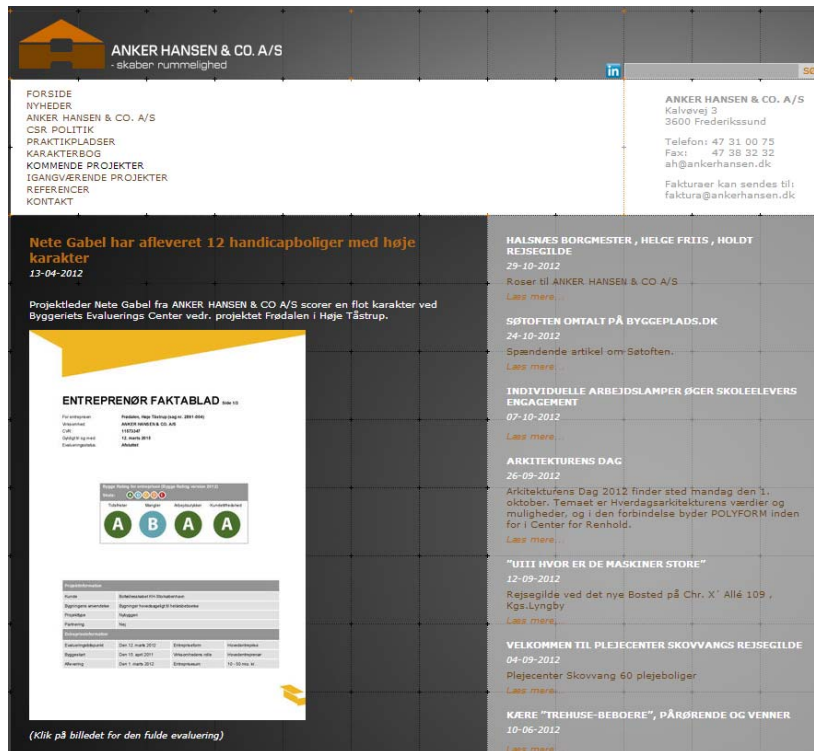


Figure 8: Example of a company's promotion of Bygge Rating²⁰

This opportunity of promoting performances was in the interests of Byggeriets Nøgletal, who accordingly introduced 'smiley' as a way for companies to communicate their performance in a different way.



Figure 9: Example of alternative rating system from Byggeriets Nøgletal's web page

²⁰ <http://www.ankerhansen.dk/?type=nyhed&id=70&popup=> - Accessed 29-10-2012

Byggeriets Nøgletal promoted their ‘Smiley’ indisputably as a marketing tool. This was revealed on their web page:

“Even though you may have achieved good track records, it can still be difficult to promote your performance in brochures, advertisements or on your web page.

For this purpose we calculate your KPIs into a smiley – called Bygge Rating by others.” (From www.byggerietsnoegletal.dk/Smiley)

The alternative rating system accordingly entailed that the KPIs were not calculated into consistent ratings, as the criteria for the ratings were different from those of BEC, and as the visual presentation of the ratings were not absolute comparable.

The dissemination of ‘Bygge Rating’ to the clients was accordingly reduced to the track records from BEC. BEC attempted to cope with this issue, by developing an online converter of KPIs to ratings.

The two above attempts by BEC to strengthen the institutionalization in the direction of their ambitions reveal how Bülow Management and Byggeriets Nøgletal were hindering BEC in pursuing ambitions of a more transparent market and to disseminate benchmarking to clients as a simple selection tool to be used in prequalifications. As a consequence of a market with several benchmarking operators with different interests in the orientation of the institutionalization, political struggles emerged as one benchmarking operator attempt to strengthen the institutionalization in an orientation which is not commonly shared by the three benchmarking operators. It had accordingly become even more difficult for benchmarking operators to construct consistent framings of benchmarking that could determine the orientation of the institutionalization.